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ABSTRACT

The Chattanooga (Tennessee) public schools are building a national reputation for the work they are doing to improve the city's schools. The Edna McConnell Clark Foundation, which has promised substantial grants for the reform of urban middle school education in Chattanooga, asked the Southern Education Foundation, through its Focused Reporting Project, to follow the school district's efforts and to report on its progress toward its goals. The evaluating team spent considerable time in 3 of the district's 11 middle schools and reports on its findings in this collection of brief notes. The plan for middle school improvement in Chattanooga is complicated, but it takes into account the essentials of high content of challenging material; high expectations of student achievement; and high support from parents, teachers, and the community. Of particular note is a discussion of how race and social class influence reform, focusing on two existing and one planned magnet schools and their commitments to diversity. Middle schools are the forgotten schools in many cities, but in Chattanooga, the importance of good middle schools, especially for disadvantaged students, is recognized. One aspect of the reforms is the merger of county and city schools. While many residents are concerned about this change, others believe that it is an opportunity to build a world class school system, using the merger as a way to focus the community on what it really wants in the schools. The middle school reforms that have begun in the city, with their emphasis on high content standards, high expectation, and high support, have the potential to influence the merged system to work toward the same goals. As the middle school reform effort continues, a number of barriers are being identified in the schools and the central office. Professional development is essential in overcoming these barriers, and the leadership of principals is critical in encouraging professional development and a focus on student performance. New models of accountability and new ways of assessment are being developed to support the new approaches to education. One figure illustrates district achievement gains to date. (SLD)

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School Reform in Chattanooga

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School Reform in Chattanooga

AN INDEPENDENT REPORT ON THE CHATTANOOGA PUBLIC SCHOOLS' MIDDLE GRADES REFORM INITIATIVE

Educators feel "a spark of excitement" as Chattanooga schools pursue reform

They call themselves the "Central Planning Team," a name cooked up from bureaucratic ingredients, but flavored with a pinch of 1990s' management philosophy. When you attend one of their meetings, you might expect to find a group of sober-faced men and women, dressed in business suits, going about their "central planning" functions in crisp, corporate style.

What you find instead is a real team, with team values and team spirit, and a good team's commitment to find its peak performance level. It's a group composed of day-worn but determined teachers and principals who, in the face of considerable skepticism, still believe the Chattanooga Public Schools can get the job done.

"We are prisoners of hope," says a woman in a brightly colored sweatsuit and sturdy runner's shoes. She teaches in one of Chattanooga's "inner city" schools, a few blocks from a large housing project. "It may not happen today. It may not happen tomorrow. But we know that if we do the right things, it *will* happen. This child *will* learn."

The speaker is one of a dozen people gathered for a late-afternoon meeting in a corner of the Chattanooga High School for the Arts. This unneeded wing of the school has been claimed by the district's central office and converted into a professional development center where teachers and principals can gather for training and some hard thinking.

Today's group—part of CPS's Central Planning Team for middle school reform—has been working together for nearly two years. The entire team is about 40-strong: two teachers and the principal from each of the district's 11 middle schools, and several top administrators from the central office. They

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Why target middle schools?

If you're over 30, you probably didn't go to middle school.

Middle schools are a relatively new concept in Chattanooga and in much of the U.S. They represent a shift away from the idea that adolescents need a "junior" version of high school, and toward the idea that students in the middle years are at a different stage of development than older teens and need a different kind of schooling.

Middle school reformers recognize the rapid developmental changes middle-schoolers go through, and they stress the importance of emotional support, patience, and tolerance. The middle school movement has injected some elementary school features into the more "collegiate" style of the junior high.

A good middle school, advocates believe, operates in a family-like atmosphere: Teams of teachers work with "their" kids all year; students receive personal counseling and support; group activities are stressed, and creative teaching is highly valued.

None of this is bad. When it's done right, the middle school approach makes school a better place for students

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Who we are and why we're doing this:

The Focused Reporting Project

Educators in the Chattanooga Public Schools are building a national reputation for the work they are doing to improve the city's schools.

That may surprise many Chattanoogans who don't follow developments in the schools closely. But consider the evidence: a dozen national, regional, and community foundations will invest more than 10 million dollars over the next five years to help push school reform in Chattanooga.

These foundations search the nation for promising school systems where foundation dollars can make a difference. They see something in Chattanooga worth encouraging. They believe Chattanooga can become a model for urban school districts, and they're willing to spend their money to help the city's principals, teachers, and students pursue that goal.

The Edna McConnell Clark Foundation has been working for nearly a decade to help cities build strong urban middle schools. The foundation's Program for Student Achievement has promised Chattanooga grants totaling nearly $500,000 to implement a middle school reform plan crafted by the district. The district began its implementation in the fall of 1993.

The Clark Foundation has asked us to follow the school district's efforts and report on the system's progress towards its own goals. This is our first report.

We call ourselves the "Focused Reporting Project" because we've put together an unusual reporting and writing team, combining elements from

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"I think we're still rising, like bread," says a principal.
"We're beginning to see the possibilities," a teacher agrees.

Like good educators everywhere, they balance optimism and gritty reality

(continued from page 1)

first came together early in the 1992-93 school year, after the Chattanooga Public Schools won a $125,000 grant from the Edna McConnell Clark Foundation to devise a comprehensive plan for middle school reform.

It's apparent as we listen that these professional educators "bonded" long ago, during many hours spent shaping a vision of what Chattanooga's middle schools might be.

Their vision, further refined in discussions with colleagues in each of their schools, earned the district a two-year Clark grant that began in the fall of 1993. Less than a year into the effort, we asked the Central Planning Team: "How's it going?"

"It's working," says a dark-haired woman in her 30s, dressed in after-school jeans and t-shirt. She is one of the district's best science teachers and a national award winner. "I've been teaching for 15 years, and for the first time, I think what we're doing to improve is really working."

The other teachers and principals murmur their affirmations.

"You can feel a spark of excitement in the district," says a principal in white shirt and loose tie, who has spent his career in the system. "And this time I don't think the spark is going to go away."

"The teachers' lounge talk is changing," explains a young math teacher. "Before, when you would go into the teacher's lounge, there was always very negative talk about the kids and the school. Now it's more professional; it's not gossip."

Middle school teachers now meet in teams on a daily basis. They're also beginning to meet across the district in study groups, and teachers can attend a monthly "network" meeting that takes up a different teaching issue each session.

These practices contrast sharply with traditional teacher workstyles, where teachers spend most of their time isolated from other staff, teaching behind closed doors.

A woman in an African print and gold bracelets explains: "In years past, we might just see each other in the halls, but now we're meeting and sharing ideas about things that are working. And that's exciting."

A tall thin bearded man, who has been quiet up to now, nods. "We're trying to pull barriers down. We're trying to remove competition. We're becoming friends."

But the members of the Central Planning Team do the hard work of schooling every day. Like good teachers everywhere, they balance optimism and gritty reality.

"You still walk in there, and you've got the kid who's not succeeding," says the teacher in the bright sweatsuit.

"Even though we have these great new strategies, we are still not getting to all these kids, and that means we have to try harder—and keep looking for something that will work.

"Any morning I may have to say, 'I don't believe it's going to work today.' I may have had a great lesson, and still I had the kid who slept or looked out the window. But I believe tomorrow I will find a way."

"I think we're still rising, like bread," says a principal with rolled-up sleeves. "We have a good core going. It hasn't gotten everywhere, but this energy is going to eventually reach out to every educator in our schools."

"The change we are having, and the change we must have more of, is a change in attitudes," the science teacher adds. "I think more and more people see what the possibilities are—what we can have in our schools if we can just pull this off."

Who we are *(cont'd from page 1)*

journalism and education research. Our team includes educators (a teacher, a researcher, a university dean), daily education reporters, and other individuals who write about education. (See page 28.)

As the schools and the community go about the important work of school improvement, it helps to have some feedback from the outside. And the best time to give communities feedback about school change is while the change is going on.

We will write about middle school change in Chattanooga in as clear and straightforward a way as possible. Our audience is not just educators, but parents, community and business leaders, voters and taxpayers—anyone who has a stake in better schools.

It's not our job to make the schools look good or look bad. The school system has given us outstanding support, but we have not asked them to approve what we've written.

We see ourselves as "critical friends" who can celebrate the good things that are happening and also raise warning flags when the district's improvement plan appears to be in danger of veering off-course.

We will produce other reports over the next year. We encourage any reader who would like to comment on our work or receive future reports by mail to contact Dr. Barnett Berry, College of Education, University of South Carolina, Columbia, SC 29208.

You can also reach us by e-mail on *America On-Line*. Just send your messages to "Focused." If you have access to Internet, our e-mail address is *FocusedRP@aol.com*.

ABOUT NAMES

We have not used teachers' real names in individual stories about change, but all of the stories are authentic. When central office staff members or principals are specifically identified, their real names are used.

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How we went about our work

Our initial classroom observations and interviews in Chattanooga's public schools left us excited about the potential for change.

CPS has the capacity to become a model urban public school district if it can move forward with its middle school reform plan and steer around a few predictable (but potentially bone-jarring) potholes that all schools encounter as they work to improve.

We spent considerable time in three of the district's 11 middle schools. We chose schools that we as outsiders felt represented important and distinct parts of the Chattanooga community. We also chose schools that we believed would be at different stages of readiness for change.

Alton Park Middle School serves one of the poorest neighborhoods in Chattanooga and has long been neglected by the school system and community. It sits perched on the edge of a toxic waste site, encircled by one of the most polluted streams in the Southeast.

Only a handful of Alton Park's 370 students are white; most are from families who live below the poverty line. The school has had some difficulty connecting to the community and to its students. On one day of our visit, nearly 20 percent of the students were tardy, absent, or suspended.

In the last year, through the efforts of school officials and some community leaders, Alton Park has begun to gain strength and support. A new principal has created a greater sense of purpose and responsibility, and some teachers have made significant strides in their efforts to improve instruction.

The school's staff must work to break a long-standing pattern of poor student achievement. The city also faces a challenge: assuring that Alton Park is never again treated as second-class.

The ***Chattanooga School for the Arts and Sciences*** began in 1986 as a risk-taking magnet school with an experimental curriculum. When the school opened, it was "wildly successful," one of its early supporters told us. "The public thought the teachers and administrators could do no wrong."

Organizers recruited some of the district's best teachers, and the school attracted parents who found the "Paideia approach" appealing and were willing to give 15 hours of volunteer time each year. The new school featured smaller classes and a more profound focus on learning core academic content. All of this contributed to the school's initial success.

Although some critics suggest that the district has hurried the reforms at CSAS—pushing the concept to all 13 grade levels in just a few years—the school is still seen by many as the flagship of reform in the community.

Hixson Middle School serves a more suburban part of the city system, although its students come from a wide variety of backgrounds. Hixson students generally score well on standardized tests, and the school's new principal has a background in middle school reform.

But Hixson also has an aging physical plant, a recent history of discipline problems, and is trying to make the difficult transition from a junior high to a middle school—all while it competes with private schools for some of the area's more affluent students.

We also visited other schools; talked with teachers, central office staff, school board members, city council members, and civic and business leaders; and attended several staff development conferences.

Recent changes in the district prompted two team members to schedule additional visits in August and September. And we are following events surrounding the fall referendum on the future of the city schools as an independent entity.

We have not singled out schools for specific praise or criticism in this first report. We believe that many of our comments apply to middle schools throughout the district, but we could not visit them all in the time available. This is our first snapshot.

Why middle schools? *(cont'd from page 1)*

and teachers. But that's only true when schools don't lose sight of their primary purpose: student achievement. The real test of a good middle school is whether all students are achieving. No school can be content with anything less.

Not long ago, one of our team members listened as a group of business leaders and the staff of a highly regarded South Carolina middle school talked. The principal described with considerable pride the school's hallmarks: team teaching; student advising; a focus on writing and problem-solving; "theme" lessons that span several subjects; and an effort to eliminate ability grouping and expect success from every student.

The president of a large communications company asked, "How have your changes improved student performance?"

"We can't say for sure," the principal said. "But obviously they would."

Maybe, maybe not. The school cannot be certain of its success until it measures what students are learning and compares that measurement to a high standard.

Frankly, some middle schools have lost sight of the achievement issue, and some have been willing to accept the theory that students in the middle years are too distracted by growing up to learn very much new. Some will say that it's enough to "solidify" the skills and knowledge learned in elementary school, give students the emotional support they need, and let them know they can be successful.

High support and high expectations are two important pieces in the middle school puzzle. But without the third piece, ***high content***—challenging lessons that teach students important new skills and knowledge—the "perfect middle school" picture isn't complete.

Much of this report to the Chattanooga community is devoted to these three puzzle pieces.

The pressure "to do something about the schools" began to build in Chattanooga in the mid-1980s

By most accounts, the Chattanooga city schools have risen from the ashes in the last 10 years. A decade ago, longtime observers say, the system was in shambles.

"When I got on the school board," one member says, "we had the worst test scores imaginable. We were spending no more than $20,000 on staff development (for more than 1,000 teachers) and $70,000 on textbooks. People were leaving the schools in droves." Some estimate that over 20 percent of all students were in private schools.

By 1984, in the wake of the much-publicized *A Nation at Risk* report calling for a complete overhaul of the American education system, school improvement was a major national topic—but not in Chattanooga. "This town was kind of sleepy relative to school reform," says the school board member.

The story is frequently told that the community's powerful Lyndhurst Foundation had difficulty getting either the city or the county schools to consider implementing—with Lyndhurst dollars—the Paideia school reforms. Some say that what changed the equation was a growing realization by community leaders and "business folks" that many of Chattanooga's future workers would attend the city's public schools.

"It's a blue-collar town, with a predominantly manufacturing economy," says Lyndhurst president Jack Murrah. "For a long time people in this community could feel that graduating from high school with relatively low skills or not graduating at all did not constitute a really great handicap, because there were fairly good jobs for people like that."

Changing expectations about the kinds of jobs that will produce a middle-class income in the future, Murrah says, has been a "fairly grinding, difficult process," both for business people and for workers.

"People looking to promote Chattanooga's economic development and spur investment in the community saw that the relatively low-level educational product was going to be a handicap," he says. "More gradually, a lot of people who have been somewhat indifferent about their own children's education are being challenged to think that the skills that got by in the past are not necessarily going to be enough in the future."

Murrah says a mutual concern about education has grown slowly out of these realizations. "In many ways you could say the worker and the manager and the business owner have all sort of gradually taken a different view and recognized they have something of a stake in improved education."

As the link between public education and economic development became more apparent in the mid-1980s, the pressure "to do something about the schools" increased. The city schools agreed to try the Paideia experiment. Political reforms in city government resulted in a reorganized school board—and a majority of the new board's members voted to hire a more reform-minded superintendent.

Now, in some quarters, the city system is viewed as very aggressive in its efforts to improve. The district leadership and school board have secured outside funds for everything from new library books to new science labs—over $10 million in all.

These funds, mostly in the form of grants, include a multi-million National Science Foundation grant to support math and science reforms, as well as support from the Clark Foundation, the DeWitt Wallace-Reader's Digest Fund, BellSouth Foundation, the Southern Regional Council, the Lyndhurst Foundation, the Public Education Foundation, and the Chattanooga Community Foundation.

School leaders are investing much of the grant money in teacher development. The current effort is extraordinary compared to the past. A few years ago, the district's staff development budget was about $75,000 a year or about $75 per teacher.

In 1993-94, the Chattanooga schools invested more than $750,000—or an average of $750 per teacher—mostly from grants. This figure, less than 1 percent of the district's operating budget, is far below typical industry investment in personnel development (3 to 10 percent), but it is not atypical for school systems.

Unfortunately for the future of staff development in Chattanooga, most of these funds are what public officials call "soft money"—money from grants that is not a part of the district's long term operating budget.

Middle school may be the last chance for some young people in today's cities

In many cities, middle schools are the forgetten schools. They are "lost in the middle" between the elementary schools, where parents are more likely to be involved, and high schools, where prep sports and other extra-curricular activities draw more public attention. But a good school system must have good middle schools.

The middle school years are a difficult time for most young people, and some educators will say that at this age academic achievement has to come second to emotional development. But many urban kids "make it or break it" in middle school—either they get the skills they need to succeed in high school (and life); or they fall so far behind that they drop out, or drift through high school with little hope of future success.

Middle school may be the last chance for some youngsters to achieve. They need to be challenged—and supported—to do so.

Issues of class and race influence reform

About 21,000 students attend the Chattanooga Public School system's seven high schools, 11 middle schools, and 21 elementary schools. Many of these students are black (the school system is 58 percent African American), and many of them are poor (over 15,000 children qualify for a free lunch each day).

Last year the district spent an average of about $3,600 per student in public funds—an amount close to the regional average but well below the U.S. average of more than $5,700. Chattanooga's 1,100 teachers earned an average $30,000 salary last year, slightly below the average for teachers across the South.

CPS is one of three systems of elementary and secondary education in the metropolitan area. Fast-growing Hamilton County School District serves a more affluent suburban population, and some city residents cross district lines to attend them. The city's private education system offers a range of choices, from church-based elementary and secondary programs to a small group of independent schools that cater to many of the city's most affluent citizens.

Some city educators say the geography of Chattanooga reflects a "caste system" in the community. City students live in the valley, county students live on the ridge, and the students who attend private schools "live way up on the mountain overlooking the poor folks in the city." Many Chattanoogans, these educators say, see the city schools serving the "bad kids," the county schools serving "the white kids," and the independent schools serving "the rich kids."

Chattanooga desegregated its schools decades ago, but like schools in many of the nation's cities, they were never fully integrated. A Chattanooga educator might have been talking about Nashville or Atlanta when he said: "Many folks still can't see Buffy and Tyrone going to school together. In many ways that is why we have three school systems."

In the mid-1980s, at what many describe as a low point in the city schools' recent history, the Chattanooga-based Lyndhurst Foundation convinced school officials to experiment with a "magnet school" that any student in the district could apply to attend. The resulting Chattanooga School for the Arts and Sciences (CSAS) adopted the "Paideia approach" described in several 1980s books written by philosopher Mortimer Adler.

The school began without league sports or cheerleaders; it offered a single core of academic subjects for all students, and it encouraged students to become critical thinkers through techniques like the "Socratic seminar" where teachers and students explored important ideas in depth. Paideia's underlying principle—that all students could thrive in the same rich academic environment—challenged traditional thinking about the need to group students according to ability.

> **"We don't have a magnet school in this part of town."**

Nearly a decade after its doors opened, "Arts and Sciences" (as most Chattanoogans call the school) remains an unusual experiment that attracts observers from across the nation. The best evidence of the school's success are the long lines that form each year during registration, and the Arts and Sciences "clone"—three-year-old Chattanooga School for the Liberal Arts (CSLA).

If part of the strategy in opening the magnet schools has been to help stem white flight to private or county schools, then the strategy has worked.

As one civic leader said, "Frankly, some parents who would not send their kids to any other public school see CSAS and CSLA as a refuge from the $10,000 a year it's going to cost them to send their kids to the private schools."

In fact, the two magnet schools have managed to attract some county residents who have been allowed to enroll their children, avoiding both the high tuition of private schools and the overcrowding in some of the county's public schools.

It's significant that CSAS and CSLA can compete successfully for some students who might otherwise attend Chattanooga's private schools. The city's top three private schools have strong reputations, and at least one—McCallie, which can claim graduates as distinctive as Ted Turner and Pat Robertson—is nationally respected.

But CSAS' success has come at a price in the city, where some people—especially in the African American community—see an elite school drawing resources away from schools where more black children and poor children attend.

At a shop in the city's west end, a barber and his customer, whose son attends nearby Alton Park Middle School, haven't heard about middle school reform in Chattanooga—but they have heard about Arts and Sciences.

"We don't have a magnet school in this part of town," says the barber, as he clips hair and shouts over a college basketball game on TV. "I am jealous of the arts and science school. Those kids are getting a better education. They ought to put the same kind of programs in every school."

From the beginning, CSAS's leaders have emphasized the school's commitment to diversity. Today, the school has an enrollment plan designed to assure that students from every part of the community are represented in the school. But the suspicion lingers that the school was created primarily to keep whites in the city schools.

District supporters hope this perception will begin to change as the newest magnet school opens in the mostly black community of East Brainerd this fall with a significant percentage of its enrollment drawn from the neighborhood.

Chattanooga's plan for middle school improvement

The CPS plan for middle school improvement is complicated and not easily summarized. If you would like to see the plan in its entirety, contact Diana Dankowski at the Chattanooga Public Schools central office, (615) 825-7279.

Chattanooga teachers, principals, and the central office staff spent nearly a year designing the district's middle school improvement plan and creating a timetable for implementation. In its successful proposal to the Clark Foundation, the district notes that the plan grew out of a "courageous examination of the weaknesses of our middle schools."

The district began to implement its Clark Foundation-supported plan in the fall of 1993.

[*Note*: When we say "the district" created the plan or took some other action, we mean the district's top leaders, usually with the significant involvement of the Central Planning Team and with some input from other principals and teachers in the system.]

The Chattanooga reform plan describes three "core principles" of middle school reform—high expectations, high content, and high community support—that will "drive all major reform initiatives."

The district's ultimate goal is simple but challenging: to create instructional programs that promote high levels of student achievement.

How CPS plans to meet its goal

Chattanooga's middle schools believe they can meet this goal by offering students a solid academic curriculum, and using four effective teaching techniques to help students master the subject matter: inquiry, dialogue, discovery, and demonstration. In simpler terms, these techniques might be described as researching, discussing and debating, experimenting, and presenting what has been learned.

The district has identified nearly a dozen "cutting edge" programs from around the nation to help it achieve its goal. Taken together, the district says these programs will:

- Establish advisory committees and planning teams at the school and district levels to promote and sustain school reform;
- Intensify efforts to improve student literacy;
- Provide students with more opportunities for individual and small-group research in the classroom, laboratory, and library;
- Increase the use of reading-to-learn and writing-to-learn programs, which have been successful in other districts in reducing the need for remedial classes;
- Create more opportunities for students to combine their study of literature, science, history, and mathematics (most middle school teachers teach only one of these subjects);
- Make it possible for students to spend time studying in teams and using their academic knowledge to solve problems, much as they might in the "real world" of work;
- Use the Socratic seminar—a carefully structured discussion among teachers and students about important subjects—to increase students' direct participation in learning;
- Expand the district's student assessment program to include not only traditional tests but writing exercises, practical demonstrations, examples of student work, and other measures of achievement;
- Help teachers learn to do more planning together to improve the curriculum and their teaching skills;

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"Excellence for all students – with high expectations, high content, and high support – creates lifelong learners who demonstrate high levels of achievement through a partnership of schools, families, businesses, and the communities."

— CPS vision statement

Chattanooga's plan *(cont'd from page 6)*

- Teach from a common set of achievement standards for each middle school grade that include but also go beyond the basic skills.

"Of course, establishing a vision and elaborating standards is a far different process than actually enabling all students to reach those standards," the district's grant proposal acknowledges, "particularly (when) those students (are) from groups that have historically been poorly served by the public schools."

Four "tiers" of reform

To help students reach high standards, Chattanooga has created a four-part plan—four "tiers," as the proposal calls them.

The *first tier* addresses the needs of early adolescents. With a three-year grant from the BellSouth Foundation, the district has begun "a full-scale restructuring of our (out-of-date) guidance program," using a program called *Grow the Flow*.

The district is also working with The College Board to help students improve test-taking skills and the National Science Foundation to create a college-visitation program for all 8th graders. An endowment from the city's Chattanooga Community Foundation will help students pursue college study.

Improving curriculum

Chattanooga's *second tier* of reform aims to improve the curriculum. That process began three years ago with the Lyndhurst Literacy Project to strengthen the teaching of reading and writing. The project, designed by a pair of national experts on literacy, integrates reading and writing instruction and emphasizes high-quality books and other literature.

By the end of 1996, the district expects to include social studies and create a three-period "humanities block" that will combine the teaching of English and social studies.

The district's plan recognizes that "Chattanooga's students have rejected mathematics and science" because the course content "is consistently abstract, bland, and developmentally inappropriate; the instructional process is almost exclusively textbook-directed and is only rarely made relevant to any real-life experiences."

The district is tackling this problem with a major grant from the National Science Foundation to redesign science and math education in the district and increase the number of students who take upper-level science and math courses. The district has established specific objectives for math and science that will show the program's degree of success.

Chattanooga's middle and elementary schools are also implementing the Library Power Project, supported by the DeWitt Wallace–Readers Digest Fund, which seeks to fortify the library programs at 32 schools by providing more materials and special training for librarians.

"Traditional libraries, long isolated from classroom instruction, will be transformed into centers of inquiry where all students can pursue individual paths of investigation," the district's grant proposal says. As students do more research work in small groups, the library will "move to the center of the teaching and learning process."

Implementing Paideia

Tier three of the Chattanooga plan calls for the implementation of the Paideia Program's key principles (see page 18) in every middle school over a period of several years. A major portion of the Clark Foundation grant has been earmarked for staff development to support this effort.

"The heart of the process" of reform, the district says, is enough time for teachers to plan new lessons and prepare for a more complicated style of teaching. To accomplish this, all middle school teachers have two planning periods a day—one for individual planning and one for team planning.

"Unfortunately," the proposal notes, "at the present time, very little instructional collaboration actually takes place during those planning times."

Monitoring performance

Assessment is the fourth tier of the district's reform program. The best way to see if reform is working, the proposal contends, is "by carefully monitoring student performance." The plan calls for close scrutiny of TVASS (the state's testing program, which uses the national Comprehensive Tests of Basic Skills) and other measures like drop-out rate, student attendance, and attitude surveys.

The district will also work on new forms of assessment, including "collecting and analyzing actual student products" like writing samples, lab and research reports, exhibits, and other work.

The district's plan includes ways to "manage and monitor the change process" and recognizes that schools have begun the reform effort at different stages of development. Each school has completed a reform plan outlining the challenges it plans to address and the specific activities principals and teachers will carry out.

(These plans are available for review by parents and other community members.)

"Each school has completed a reform plan outlining the challenges it plans to address and the specific activities principals and teachers will carry out."

Some early observations about the city's middle school reform

When the Focused Reporting team began our work with the Clark Foundation, we agreed to try and answer a dozen important questions about middle school reform in Chattanooga. Here are our early answers to several of those questions. Some other questions—including whether reform has improved student achievement—will need to wait until the school system in further along in the reform process.

Q. How focused are district educators on middle school reform?

A. We were impressed by how much the district is focused on improving its middle schools, with the full intention to improve student performance. The superintendent, the former associate superintendent for curriculum, and the Central Planning Team have done a good job describing the need for middle school reform. Their words and actions have set the change process in motion.

Speeches, workshops, conferences (especially the national staff development conference in Chattanooga), training sessions, and study groups have all made a difference in what people believe, in what they know, and in how they view the possibility of change.

School board members, teachers, principals, district officials, parents, and business leaders all speak some of the language of middle school reform. They talk about block scheduling, Hawaii Algebra, Lyndhurst Literacy, and seminaring, with varying degrees of understanding.

Challenging content, high expectations, and high support are increasingly becoming common points of discussion among educators—and also among some parents and community leaders.

The next step is to come to grips with how to intensify the reform effort to such a degree that the significant differences in readiness among the various middle schools can be addressed and remedied.

The school system needs to rethink some of its approaches to recruiting, preparing, and evaluating teachers. It needs to vigorously pursue plans to build stronger relationships with the local university and colleges.

Some schools that have been victims of neglect in the past may need extra resources and higher priorities. For example, although Alton Park's staff development needs are great, very few Alton Park teachers have completed the Lyndhurst Literacy training offered through the district, and none were scheduled to participate in the first summer of the Paideia University.

The departure of associate superintendent Paula Potter, who was an important figure in the reform effort, creates an additional challenge for the district. Potter's energy and commitment will have to be replaced for the district's ambitious plan to succeed. The superintendent's decision to give Diana Dankowski an important leadership role in middle school reform should be a big plus.

Superintendent Harry Reynolds' decision to "test the waters" for another superintendency several months ago also raises questions about the continuity of reform efforts. And the city council's decision to put the future of the school system to a vote only adds to the uncertainty.

Strong, visible leadership is critical to change. As one district reformer puts it, the teachers and principals who do the hard work of reform every day (like the Central Planning Team) "need to know that the central office has not abandoned us."

Chattanooga's school board leaders have expressed their determination to support the middle school reforms "100 percent." These school board members are in the best position to emphasize to the community and the school administration the value of reform and the district's long-term commitment to change.

Q. Do principals and teachers know about the middle school reform efforts?

A. Leaders of the Chattanooga Public School system say they share the Clark Foundation's vision of high achievement for all students, and they have made this vision the focal point for the district's many middle school reform efforts. What do teachers and administrators in the schools know about the Clark program and its emphasis on content, expectations, and support?

The Clark phase of middle school reform in Chattanooga began in 1992-93 with a planning year and a chance for many teachers in the district's 11 middle schools to hear and comment about the proposed reform plan.

Most of the Clark money is being spent on staff development at the school level, and each school will receive $10,000 a year. For these reasons alone, most teachers have heard about "the Clark grant."

When we asked the question: "What does the Clark Foundation hope schools will accomplish?" many teachers had some awareness of the district's commitment to help all children achieve at high levels. Some share the commitment; many others are skeptical or uncertain and have not yet "taken the pledge" to accomplish this ambitious goal.

Not surprisingly, teachers and principals who've been involved in the reform effort from the beginning have the strongest belief in its eventual success.

Most members of the Central Planning Team, for example, believe the schools can achieve the goals described in planning documents and grant proposals (see page 6) if enough teachers "buy in."

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Early observations (cont'd from page 8)

Few school districts in our experience have the will or the resources to engage large numbers of teachers in discussions of reform, as Chattanooga did last February at the city convention center. Newsletters and speeches by key district officials have been other ways of getting the word out.

The increasing visibility of Central Planning Team members in their respective schools has probably contributed most to the growing awareness of reform efforts.

But planning team members were quick to tell us how difficult it is to engage enough of their colleagues in reform. The biggest part of the task, they say, is overcoming ingrained beliefs about students' ability to achieve.

Coming to believe that more success is possible hinges on what educators know and what they can do. We see a strong connection between the teachers who know content and are adept at a wide range of teaching strategies and the teachers who have high expectations for all students.

If teachers (and principals) don't know *how* to reach every child, they will never believe they *can* reach every child.

A majority of the district's teachers will need to add new skills and knowledge to their "toolboxes" if they want to master their craft completely. To help teachers reach this level of accomplishment will require even more dramatic reorganizations of the schools. Block scheduling, common team planning, and the like are only the beginning.

Again, the district has reached a critical juncture with the departure of Paula Potter and a possible shift in the winds that blow reform.

Veteran teachers who have seen change efforts come and go and have adopted the attitude that "this too will pass" are waiting for Chattanooga's current school reform plan to fail.

The district has offered an early retirement incentive for its employees, and at least 150 teachers and administrators have accepted. This will be a critical time for the district to aggressively seek out replacements for these retirees who are most ready and able to carry the middle school reforms.

Q. To what extent are district educators implementing reforms to achieve specific student performance goals?

A. There is no simple answer to this question after a single year. Because systemwide middle school reform is still in its early childhood, we were not surprised to hear this frank admission from one of the district's leaders of reform: "Our focus on student performance really varies from person to person and from school to school."

We were told by several educators that the district's two experienced magnet schools—CSAS and CSLA—were generally ahead of the other schools in terms of focusing on actions to improve student performance. This doesn't surprise us. CSLA is a by-product of CSAS's success, and after nearly a decade of experience, CSAS's challenge is to sustain and refine reform, not to create it.

The lack of attention to student performance stems from several sources. One is the state's and district's current testing system, which is far more likely to steer educators toward raising basic skills test scores than student performance. And there is a difference.

Teaching to the test

It is relatively simple to "teach to the test" (without actually cheating) by drilling students on items very similar to those that will appear on the TCAP tests.

Even while the district has promoted new forms of teaching and learning through such approaches as Paideia, the Lyndhurst Literacy Project, and the like, officials have still mandated that teachers used "canned drill" teaching materials in order to raise test scores.

This approach will sometimes produce temporary score gains, but since they do not really increase students' understanding, the scores do not hold up over time.

It all gets back to an old and true adage in education: *What you test for is what gets taught*. Tennessee and most other states need to keep looking for ways to test for higher knowledge and skills. And so does the Chattanooga Public School system.

Unfortunately, when the district adopted new middle school curriculum standards last year, there wasn't much new about them. These standards, in the estimation of experts inside and outside the district, are very traditional and will not help the school system raise the quality of its teaching and learning.

"The curriculum standards created are not very usable," says one district expert. "At best, they are test objectives. They do not describe the kind of content and the performance standards that our district needs. We need the kind of content and performance standards that will help folks teach differently."

Most school systems that are serious about systemwide school reform have thrown out such weak standards and created more challenging ones—often drawing on the work of the National Council of Teachers of Mathematics, the National Science Foundation, and other groups.

Some principals and teachers in Chattanooga have been studying ways to expand student assessment. These efforts are off to a good start and need to be encouraged. They also need to be expanded to include a districtwide effort to develop higher curriculum standards for all students.

Helping teachers teach better

A related problem revolves around teacher beliefs about the teaching of basic skills (like fractions in math) or the teaching of more advanced skills (like multi-step mathematical problems that require a student to use both algebra and geometry).

Students don't always have to learn the basics first. Sometimes they learn them best in conjunction with more complex problems and tasks. Teachers like Marguerite Williams (whose teaching is described on page 14 of this report) use rich, complex tasks to get across basic and more advanced knowledge. Many teachers and administrators

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Early observations (cont'd from page 9)

have yet to master this belief and the teaching skills necessary to support it.

Some of the district's professional development activity has focused on this kind of teaching, but teachers need more opportunities to try out the techniques and discuss their effectiveness with colleagues. As one central office administrator put it: "Now we need to provide opportunities for teachers to make sense of what works and what does not."

Good teacher evaluation

Good teacher evaluation and coaching is an important part of reform. In most school districts across the nation—and Chattanooga is no exception—the evaluation and coaching done by principals has been little more than going into a classroom and checking off whether a teacher demonstrates certain behaviors.

Chattanooga has taken steps to improve its teacher evaluation by asking teachers to prepare and demonstrate a lesson.

"But it's still a thing," one district administrator said, "where principals who may not have had the same training as the teacher must judge whether the new knowledge is being put to use and put to use well.

"It's just not going to do the trick," says the administrator. "Most principals don't know how to judge good seminaring or cooperative learning in science—or they aren't well-trained to give the feedback teachers need now."

A better solution might be for the teacher teams established as part of the middle school reform to share evaluation responsibilities with principals and focus more on the successful implementation of new strategies. But many of the teams are not yet functioning effectively.

A teacher evaluation system that fits the new reforms would encourage and enable teachers to observe and critique each other's work, to assess the evidence of student achievement, to study and learn new content, and to make decisions together about how the content can be best be put together for a diverse group of middle school students.

Today, it is rare to find a teacher in Chattanooga who has regularly observed colleagues teach, much less critiqued another teacher's lesson.

At one school, when the 8th grade team was asked to name the best math teacher, they said: "We don't know. We have not seen anyone but ourselves teach. Not many teachers get a chance to see each other teach."

When they begin to observe and critique each other, Chattanooga's good teachers—and there are many of them—will teach even better.

Q. What happens in the district and the schools to cause teachers and administrators to adopt, maintain, sharpen, diffuse, or lose the focus on efforts to improve student performance?

A. We've identified three issues that will have much to do with whether the focus on student achievement sharpens or diffuses: time and professional development, the district's lengthy list of reform strategies, and a tradition of top-down leadership.

New ways to use time

More than anything else, district and school educators must find more time—and new ways to use their time. The Central Planning Team, for example, has real potential to sharpen the district's focus on improvement, but its members have had little time to actually work on becoming leaders of reform. They are busy people who teach or serve as principals all day. All their energy can easily be spent on doing what they have always done.

Principals are important instigators of reform, especially in the early stages. "We are seeing better things happening at the middle schools where principals truly know something about curriculum and instruction and will push and pull teachers in their school," a district leader told us. "But it is not enough.

"One principal told me that he is having to neglect a lot of what he ought to doing in terms of monitoring and leading reform. He said that he just has too much paperwork and so many other things that as a principal he has to get done. I have heard this from more than one of our most capable principals."

Most schools have one or two principals and dozens of teachers. Sharing the leadership of reform with teachers makes sense. But teachers are just as challenged by the minutes and hours available during and after school. Teachers need more time, and they need to make better use of their time.

Schools will not improve if the professionals who run them neglect the core aspects of good teaching and learning, and how to assess the quality of each. Chattanooga teachers have spent time trying to gain a deeper understanding of important issues like literacy, Socratic seminaring, and teaching algebra to students who have yet to master the basic skills in traditional ways.

But in Chattanooga, as in so many other American school systems, professional development is still offered to teachers at the margins of their work lives.

Professional development must be at the center of a teacher's work, not at its edges. To make this transformation will require new conceptions of teacher time.

Over the last decade, studies of school change have revealed how the lack of time has been the most difficult reform barrier to overcome.

Most schools seem stymied when they confront the time issue. As some Chattanooga educators might say, they have trouble "thinking out of the box" about time.

If we expect teachers to design lessons that reach every child, then teachers must have the time to plan lessons with every child in mind. Japanese schools set aside significant blocks of time each week for teachers to prepare

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themselves to teach their best. Japanese students perform better as a result.

Creating more teacher time

In the United States, some schools and districts are "creating" more teacher time by having students engage in community service or work on projects under the supervision of other adults.

Some schools are sending students home earlier one day a week to create extra teacher time. Other school districts are adopting year-round calendars that can provide longer stretches of time for preparation and professional development connected directly to the work teachers are currently doing or the curriculum they intend to teach.

Teachers use this time away from students to learn new knowledge and skills and to plan strategies to reach every student.

If we expect peak performance from teachers, they need "peak time" away from students to sharpen their skills and knowledge and to plan strategies to reach every student.

Managing and teaching 140 or more diverse, energetic students for six or seven hours a day is exhausting work. Teachers will, of necessity, do a lot of planning and training after school, but they will not always have the energy to do their best work.

Teachers need time and money to visit other schools and witness reform in action. But there's never enough time and money to do all the visiting that needs to be done.

Fortunately, teacher "e-mail" networks are growing like kudzu. Chattanooga teachers need easy access to networks and on-line services where they can share ideas and gain new information.

Some districts are arranging for teachers to work in local businesses and industries on sabbaticals or summer breaks. The work involves professional tasks that sharpen teachers' knowledge and skills—sometimes in the subjects they teach; sometimes in the strategies or technologies they use to teach.

Chattanooga's double planning periods for middle school teachers are a critical first step in addressing the issue of teacher time. They should be protected at all costs.

"Reform-a-day"

While lack of time and the need for better professional development clearly affect the capacity of teachers and administrators accomplish reform, the Chattanooga Public Schools face other potential barriers to success.

It's possible that the district has too much of a good thing going.

"If you have ever built a house or watched one being built, you know how far the process may stray from the ideal."

In addition to its major focus on the Paideia method, CPS middle schools are involved in the Lyndhurst Literacy Project, Project CRISS, Writing to Read, the College Board's Algebridge program, Hawaii Algebra, Family Math, new science curriculum standards, Library Power, Grow the Flow (a redesign of the student guidance program), and other strategies.

The district is also reorganizing a middle school around Montessori (active learning) principles, and it has established its third magnet school—a "21st Century" school based on principles of futurist and business consultant Joel Barker.

In the district's proposal to the Clark Foundation, these efforts are thoughtfully integrated into an intricate reform blueprint which—if ever fully assembled—could make Chattanooga's urban schools among the most successful in the nation.

But if you have ever built a house or watched one being built, you know how far the process may stray from the ideal. The more innovative and complicated the plan, the greater the likelihood for false starts and misunderstandings. The faster the plan is implemented, the less time there is to change old ways of doing things.

Chattanooga's school reform plans are innovative and complicated and the pressure for rapid implementation is ever-present (consider this report). The district must be careful not to let the engine of reform careen out of control.

Why is the district trying to do so much at once? In Chattanooga and in school districts across America, money fuels the engine of reform. You don't reject business-as-usual without investing in retraining and retooling.

When private industries do this, they "write down" losses that investors accept as necessary for long-term profitability. To complete the analogy: School districts have to convince their communities that investments in change will profit the community in the long run. If they cannot, then they must find the money somewhere else.

The community's investment

Thus far, leaders of the Chattanooga Public School system have not been successful in increasing the community's investment in the schools. Instead, they have turned to private sources of money to fuel reform. Each time the district accepts a foundation or government grant, it reshapes its agenda and adds to its commitments.

Each grant is a two-edged sword. The grant funds provide money for curriculum improvement and professional development and provide some impetus for change. On the other hand, all the activity creates an atmosphere that one of the district's most committed supporters describes as "reform-a-day."

So many reforms can be overwhelming to teachers who—from the perspective of their busy classroom lives—cannot always see how reforms fit together, if they do.

"There is the Socratic seminaring, which is based upon Paideia prin-

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ciples," a middle school science teacher observes, "but how does that fit within a Montessori school that is intended to implement the new National Science Teachers Association standards?"

"I think about my elderly father," says another teacher. "He had so many doctors' prescriptions you had to wonder how they could all work together."

The kind of school reform imagined by Chattanooga's education leaders goes far beyond what most teachers have experienced in the past, when "reform" has meant someone telling them how to implement a new way to teach math or reading.

One Chattanooga administrator admits that "we're doing too much. In many cases, these reforms are really about the same thing. But teachers are more likely to say, 'today we are going to do seminaring, tomorrow we are going to do cooperative learning.' They don't necessarily see the things that tie it all together."

Chattanooga's leaders are proposing a dramatic change in the way teachers teach. Communicating that message to teachers is all the more difficult when they are being asked to implement so many different initiatives. It will require extraordinary communication.

Leadership for change

The Chattanooga Public Schools have set out to do nothing less than build a new school system. During the 1993-94 school year, the pressure from the central office to create high expectations for student achievement was tremendous.

And the vow of some administrators to "give no quarter to those who refuse to believe in the potential of our children—or their own potential as educators," set up a sometimes confrontational atmosphere.

These tough words were directed at complacent teachers and principals content with the status quo. While the frustration was understandable, in the long run, threats are not likely to lead to the kind of collaborative, creative teaching and learning community that Chattanooga's reformers imagine.

"At times the central office has been very threatening toward principals," one of the district's more forward-thinking principals told us. "We've talked shared leadership out of the side of our mouth, but we haven't seen too much of it, because the central office has been autocratic for so long."

> **"I don't think you can expect schools to really change unless they own the change."**

As of last spring, this principal saw some change in attitude—and some hope that the central office would decide to give schools more say in how they operate themselves.

We believe this step is crucial to long-term school change. Finally, principals and teachers have to make schools better. Others can help, but they have to get the job done.

"The city school system is absolutely, unequivocally, and unapologetically, top-down," says a prominent civic leader active in school affairs. "In my opinion, it is their greatest Achilles' heel. I do not believe you can change the ways schools do business from the top down. I don't think it's do-able.

"I don't think you can expect schools to really change unless they own the change, and it is impossible to own change that is imposed."

Recent changes in the district's top management could also bring changes in this situation. But school district leaders will still find themselves in a situation familiar to many change agents in the public and private sectors. How do you shift from a history of top-down management and still assure quality?

Many teachers and principals may not yet have sufficient experience with or understanding of the new reform agenda to make wise decisions on their own. Consider the story of the middle school principal who insisted on spending some professional development monies to hire a high-priced consultant to come in and dispense information to teachers.

This one-shot workshop, lasting two days, cost the school more than $4000. At a time when the district is struggling to pay for all teachers to learn the Paideia and Lyndhurst Literacy teaching principles, this expenditure, according to one district administrator, seemed "extravagent and wasteful."

Why not use some of the money to buy time for teachers to explore the issues involved—and let them determine what additional help they need, if any?

That's how teachers learn to manage their professional development and their professional environment.

"Us vs. them" mentality

The district has not yet vested much authority in the Central Planning Team for middle school reform. We suspect that these teachers and administrators, who have the respect of their colleagues, can do a lot to help bridge the "us vs. them" mentality that exists in the Chattanooga schools, provided the Team has the genuine support of school system leaders.

In so many different ways, the district must find new strategies to lead without commanding.

They must find new ways to provide new information to teachers and principals, without just telling it to them.

They must even find ways to inspire educators tied to the old ways, without just proselytizing with empty rhetoric. Some district administrators know how to do this much better than others.

Chattanooga has a chance to accomplish its ambitious reform agenda if these educators emerge as the district's middle school reform leaders.

Finally, the district's top leaders must create a more supportive environment for challenging the status quo.

As one principal put it, "we have to be willing to let people make mistakes. That's part of empowering them. If you send the message that risk-takers 'better not mess up,' then you're not going to have any risktakers and you're not going to improve your schools."

High Content

Every student needs to master challenging academic material

For school reform to work, teachers must be well prepared to teach their subjects. They must believe students can learn challenging material. And they must know how—or learn how—to teach in a variety of interesting ways so that they reach all students.

Not all students learn best by listening to a teacher go over a set of facts or concepts, soaking up information like a sponge.

Researchers have known for a long time that some students master more by seeing, by working with their hands, or by working in groups where they share information with other students.

There is reason to suspect that even fewer of today's students learn best from lectures. Some educators (and parents) are convinced that constant exposure to television, computers, interactive video games, and other stimulating electronic environments have raised the ante for teachers.

Even the brightest students may have trouble reaching their potential when they spend most of their time at school listening to "chalk talks."

In today's information age, what is known about some fields of study doubles every six months. Students can't learn all there is to know, but they can learn to create and use knowledge.

That's an educator's way of saying that students must learn important ideas and concepts, think through problems, draw conclusions, and apply them. This is the heart of the Paideia approach (see page 18).

The teacher who guides students through this process must use "high content" materials and sophisticated teaching strategies to inspire and lead a diverse group of 11- to 14-year olds.

Too much lecture

But the truth is that too many teachers still rely mostly on lecture and drill, and too many still teach all their students the same way.

Most teachers learned to teach from a mentor teacher who helped them when they were students and first-year teachers. Other teachers are still modeling the teaching they observed when they were in school.

"Who taught you to teach?" a Chattanooga teacher was asked. She thought for a moment. "I teach like Mrs. Crawford, my high school English teacher, who inspired me to go into teaching. I always remember how she taught."

"But the truth is that too many teachers still rely mostly on lecture and drill, and too many still teach all their students the same way."

It's likely that Mrs. Crawford was a superior example of 1950s/1960s teaching. Would her style of teaching be effective in today's urban classrooms? Only if she knew and used a variety of sophisticated teaching techniques.

Today's teacher may work with one student who arrives at school in a BMW, driven by parents who are Ivy League college graduates, and another student bused from the projects without breakfast, whose parents (or single parent, or grandparent, or guardian) cannot afford to buy prescription eyeglasses. Often these students have differing learning styles and face different problems outside of school.

One child may live in home where books and magazines are abundant, where families make regular trips to the bookstore, the zoo, the museum—and where parents stress the importance of study. Another child may have only the books she brings home from school or gets on trips to the library—if the library is nearby.

Education may be an important idea in the home, but there may be no one with enough education to help the child as she studies or prepares projects for school.

The same teacher is expected to teach high content to each of these children effectively. And that is a reasonable expectation, provided the teacher has a deep enough understanding of the content, the student, and the teaching strategies that will work.

For many teachers who are now attempting to teach high content, it can be discomforting experience. Algebra is a "gateway" subject. Studies show that children who don't take algebra are much less likely to take other courses that lead to education after high school.

In Chattannoga, middle school teachers are expected to teach pre-algebra and algebra to every child, including students who have not yet mastered fractions.

"It is like diving off the high board without dipping your toe in the water first," says one eighth-grade math teacher. "The kids feel uncomfortable, but it is good for them to take some academic risks.

"Still," she says, "the teaching challenge is significant. How do you teach algebra in small groups to students with differing skill levels—and when one kid runs into another's foot while walking to his desk, the other kid's solution is to beat him senseless?"

Teaching "high content" to all children is a challenge to the best-prepared teacher. Without a lot of preparation (and a basic belief that it can be done), it's just not going to work.

What students say

Students are experts about school. Most students have a mix of teachers—hard and easy, engaging and boring.

"He just expects us to memorize the facts," one Chattanooga seventh-grader said about a social studies

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Teachers who teach high content . . .

They are not yet the norm, but there are powerful examples of teaching and learning high content in the Chattanooga schools.

Take a brief look at the work of one high-content teacher. She is an African American woman in her forties who has served as a teacher and administrator during her 20-year career. We call her Marguerite; her real name and school are not important. What is important is her teaching.

Marguerite's Way: A Full Measure of Teaching

If you choose to shadow Marguerite Williams for a day, wear comfortable shoes with plenty of traction. She's on the move.

In her dual role as teacher and administrator, you may find Marguerite overseeing a building repair, evaluating a teacher, teaching sixth grade math, or wrangling a fleet of yellow buses at the end of the school day.

Despite her split duties, Marguerite still finds the energy to apply her considerable knowledge and skill to the work of a high-content middle school teacher. The math classroom where she spends half the day sizzles with her excitement and enthusiasm. Learning is fun, exciting, and challenging for all students.

Marguerite Williams uses the physical layout of her classroom to envelop her students in mathematics. Today's lesson is on measurement, and the measurement theme is reinforced on bulletin boards and wall decorations. There are no desks in neat rows; instead, tables with sturdy chairs are placed around the room, allowin g more opportunity for students to learn together.

Materials and storage bins are organized so students can easily keep track of their class assignments. A variety of tools that can help students learn about math concepts are readily available.

The focus is on student achievement: Marguerite has stretched a rope across the blackboard where individual student math progress charts are visible and accessible. The room feels like learning.

It's easy (if not always effective) to teach measurement with a little lecture and a lot of worksheet practice. But this is not Marguerite's way.

She begins by reviewing her students' progress in their mathematical understanding—where they began and where they are headed. She shifts to a discussion of their previous lessons on measurement and then quickly instigates a group learning activity that combines advanced knowledge of measurement with an exploration of how humans historically have used measurement in their lives.

Students will use their flattened hands to measure the length of a rectangular table and the height of one the classroom doors. In less than 15 minutes, small groups of excited students decide how they will divide up their tasks; monitor their learning and behavior; and collect, record, and evaluate the information.

Soon Marguerite is leading a class discussion on the results. "Why did our groups come up with such a wide range of answers?"

The students return to their groups to speculate about possible reasons for the differences. After five minutes of discussion, students offer some well-reasoned theories—ranging from incorrect positioning of hands to statistical miscalculations.

Marguerite praises the students for their creative approach to problem-solving and keeps imploring them to think more deeply. "You guys are really doing a super job thinking. I am impressed."

Using their own experience, she asks the students to draw conclusions about measurements in early times that were done with arms or hands. After a few minutes, Marguerite neatly slips into a conversation about how differing measurement systems could lead to a variety of injustices.

One student hypothesizes that people were often cheated in the past when they purchased items that required measurement by inexact methods. The class ends with a discussion about the development of modern methods of measurement, including the metric system.

This simple but rich lesson illustrates how well students can work together under the leadership of a teacher who not only knows mathematical concepts but knows how to make those concepts relevant to a diverse group of 11- and 12-year olds.

The lesson reveals the power of cooperative groups in completing tasks and finding solutions to problems. It's also a good example of "active learning." Marguerite asked students to solve problems that grew out of their own work. The activity required them to use high-level thinking and reasoning skills and to learn from each other.

Perhaps most remarkably, using a sophisticated teaching model, Marguerite succeeded in engrossing these students during the "arsenic hour"—the last period of the school day.

. . . and teachers who don't.

Some teachers may want to change without knowing how. Others may not realize they need to change.

One teacher we met, Lydia Lapin, spoke glowingly of a week-long training session where she worked with other teachers to learn new ways to teach mathematical concepts. She is clearly committed to change and dedicated to her students and her school. But there are problems in her class.

Lydia's Way: Love and Low Expectations

Lydia is ranked by her principal as one the school's best math teachers. Lydia's colleagues believe she is a good teacher, but in her school, like in most other schools in Chattanooga and across the nation, teachers make this claim more on blind faith than on actual evidence.

In fact, despite Chattanooga's efforts to improve teaching, very few teachers in the district have an opportunity to see others teach—one of the best ways to refine and improve good teaching.

Lydia's undergraduate degree in elementary education has done little to deepen her knowledge of mathematics. She has a master's degree, but it is in educational administration, not in her content area. That's the general pattern for teachers in Tennessee and other states.

Most teachers seek an advanced degree so they will earn more money and perhaps prepare themselves for an administrative position in the future. There are few incentives in the system to encourage teachers to pursue a graduate degree in a content area and deepen their knowledge of what they teach.

We watched Lydia teach for two days. She is experienced, at ease in the classroom, and she understands and cares about her students. But her limited content knowledge and her "in the box" teaching style restricts her ability to challenge her students.

Walking into Lydia's class is not a bad experience. Her students are hard at work, though they work passively at their seats. They are attentive when called upon—perhaps because Lydia continually expresses her respect and concern and even love for them.

But how much math are they learning?

The lesson is well structured. The objective of the day—written clearly on the board—reads "write quotient as a mixed number in its simplest form."

This task seems appropriate and straightforward enough. Students need to learn a great deal about fractions in order to master algebra—the goal for all Chattanooga students by the time they finish the middle school. But for all her care and concern for these children, Lydia's expectations and her instruction are at a low level.

The students are expected to spend the entire 45-minute period using a calculator to transcribe simple division problems into mixed fractions.

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23/5 = 4.6 = 4 & 6/10 = 4 & 3/5
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Few questions are asked, and Lydia doesn't expect students to explore questions about the mathematical processes involved or discuss how one form might be more useful than another in a given situation.

The calculator is seldom used to solve problems; for the most part, students use it instead of a pencil to quickly conduct routine mathematical procedures without much thought.

During the period, students solve 41 similar problems. While drill and practice has its place, this day's lesson is devoid of any application to real life situations of the type offered by Marguerite.

Is the lesson typical? Yes, Lydia says. "We generally teach this way in our school. We will spend about two minutes introducing a concept and then practicing it." Other visits to other classrooms confirm her statement.

It appears from standardized test results that the strategy is not working very well.

Only 7 percent of the 6th graders, 2 percent of the 7th graders, and 5 percent of the 8th graders at Lydia's school scored "above average" in mathematics on the nationally standardized test used by the state of Tennessee.

Aloha y'all!

(The title was borrowed from a greeting posted in Karen Kiver's Hawaiian Algebra classroom. Karen is not her real name, but this is her story.)

Word problems

Algebra teacher Karen Kiver knows the mere mention of "word problems" to students (and some parents and teachers) can cause palms to sweat and lips to curl.

"But guess what," Kiver told her eighth-grade class in mid-September, "that's all we are going to do in this class this year."

The class released a collective groan, but the students weren't exactly shocked. Though this was the first day to actually use their new algebra books, they'd spent several weeks on a project that set the tone for how algebra would be practiced throughout the year.

The project required the students to analyze information about student discipline referrals from the previous semester, classifying each incident into one of eight categories, calculating percentages and creating pie charts.

But it didn't stop there. Once each group of students had their visual aids ready, they made a presentation to the class, their teacher, and a panel of faculty members who asked them such questions as "If we wanted to target the referrals for disrespect, which grades should we begin with?" All of this was videotaped, so that students could go back and review their presentation.

That's important because in Kiver's class, presentations will be more frequent than pencil-and-paper tests.

This is Hawaii Algebra.

Created by students

Hawaii Algebra is the product of the Algebra Learning Project at the University of Hawaii. There, professors brought middle and high school students from across the islands to campus to test various ways of teaching and learning algebra.

Surprisingly, students found they liked "word problems" best. Students testify in the foreward of the book that solving real-world problems proved more interesting than simply working sets of equations.

One student also wrote "be ready for homework!"

Those are words to the wise because in Hawaii Algebra class, there's homework *every* night.

A typical Hawaii Algebra class unfolds like this. Students begin by reviewing a set of seven to nine problems worked at home the night before.

This homework includes a review of basic skills, practice in the concept discussed in that day's class, and an introduction to a new concept to be discussed the following day.

The daily discussion of homework in class, therefore, is a natural way to take students to the next step. Students must keep their homework in journals, and they color-code their corrections to homework during class discussions.

Usually, after the homework problems have been solved, students are presented with new word problems, and they break into groups to solve them cooperatively. Then, each group must present the problem to the class and explain how they did it.

"The emphasis is not only on the answer, but how you get it. And often, there is more than one way to do it," said Kiver. "Some students may draw a graph, others will want to do trial and error. The important thing is to know why you got it right."

That focus fits nicely with the overall emphasis in the Paideia method of teaching—the philosophy embraced by Chattanooga's middle schools. Paideia philosophy stresses that the "why" is as important as the "what."

Chattanooga's work with Hawaii Algebra has not been without pitfalls. Kiver, for instance, had some discouraging test results last year.

Middle school students who study algebra before the ninth grade can take a state-approved Algebra I exam to "test out" of that course in high school and move right into Geometry I. Only four of Kiver's 178 students passed.

"My students weren't used to the straight, multiple-choice test in algebra. Many times, they read too much into the question. They do fine on tests that include open-ended questions," Kiver said. "I *know* and can document that my students have learned."

Kiver sat down with high school teachers and showed them her students' portfolios—or folders of work. An agreement was struck that those with a "B" average or better would be given credit for the course. Teachers at both levels agreed the test simply didn't match what was being taught.

Not all schools stick with it

Not all schools reacted with such confidence to the poor test performance. At another Chattanooga middle school, where both traditional algebra and Hawaii Algebra are taught, teacher Al Addison said faculty members were encouraged to place the "top" students into the traditional course so their chances of receiving high school credit wouldn't be jeopardized.

"It's kind of a shame because I think it would help to have a better mix in my Hawaii Algebra class," Addison said. "I had one student switch from the Hawaii Algebra for scheduling reasons, and almost immediately she wanted to go back to Hawaii Algebra class. It's just more interesting."

In addition to the unofficial "tracking" of students by math ability, Addison also struggles with the lack of textbooks. He doesn't have enough for every student. Students must leave their textbooks in class each day. That's a critical problem because of the integral role homework plays in the method.

"It takes me two days to accomplish what's supposed to be done in one," Addison said. He also noted some other Chattanooga schools have turned away from the method because of student resistence to nightly homework.

Still Addison, who teaches a traditional algebra course and then a Hawaii Algebra course back to back, said he's becoming sold on the process.

"Karen's experience with the tests scares me. But I like it and the kids like it," said Addison, who described himself as "old school but changing."

"I do know that what we had been doing had not worked for most students for a long time."

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HIGH CONTENT (cont'd from page 13)

teacher. "It's hard work, but it makes you hate history." This kind of "just the facts, ma'am" approach ignores the reality that students must be able to use information in complex ways before we can say they are "educated."

Students who spend time in the classrooms of "high content" teachers say "learning the hard stuff just comes easier." Quality teaching can be found at any Chattanooga middle school.

One school that has worked hard at redesigning the way teachers teach is the Chattanooga School for the Arts and Sciences, which began the Paideia approach in 1986.

Students at Arts and Sciences—many of whom came there from other district schools—say CSAS classes "are just far more challenging."

"I like school better because the teachers let us have our own opinions. It's not just teachers talking," says one CSAS student.

"Classes are taught very differently," says another. "The teachers do not go through the same routine day in and day out."

Learning to teach differently

Few middle school teachers in the Chattanooga Public Schools—or in most of Tennessee's other 1,500 schools, or the nation's 80,000 schools—are well-prepared to teach high content in the way that Marguerite does (see "Marguerite's Way," p. 14).

Learning to teach differently is painfully difficult for teachers. Someone described the process as "like rebuilding your car's engine—going 60 miles an hour." The intensity of daily teaching is hard to imagine for those outside of it, and few other jobs compare with teaching's relentless pace.

Teachers spend five or six hours a day with 150 or more children, some of whom have been neglected both academically and socially. Teachers may start and stop a half-dozen 50-minute classes per day. In between, they shepherd children to and from buses, through the cafeteria, and to special events. They plan, they oversee extracurricular actitivities, and most teachers take work home.

On top of all this, the school system and the community expect teachers to find ways to teach more content, more effectively, to more students.

Even at the Chattanooga School for the Arts and Sciences, where reform and change have been unfolding for almost a decade, much work remains to be done. Too many teachers, the principal says, still have not learned "to teach outside of the box" of traditional teaching techniques.

"Moving weak teachers out of a school and out of the school system is not a simple task."

The problem of teachers who are unable to get out of the traditional teaching box is intensified when most of the teachers in a school fit that description. And some schools have more than their share of less able or less prepared teachers.

The reason may be a history of poor principal leadership; it may be district policies that indirectly encourage weaker teachers to move to schools where principals, teachers, and parents have lower expectations.

Whatever the reasons, reform is a challenge in a school when, as one principal said, "only 50% of the faculty are willing and able to meet the challenges ahead."

"I have one teacher," the principal said, "who gives detentions to kids who get out their seats. Over a two-day period, she sent 58 kids out of her class. She does not know how to teach these children."

The district's Intense Assistance Program is designed to give poor teachers the help they need before they are replaced, the principal said. "But I have eight teachers who need IAP, and the time and the paperwork required make it difficult to work with more than one or two teachers a year."

Moving weak teachers out of a school and out of the school system is not a simple task.

The Chattanooga central office has indicated a commitment "to turn the heat up" on poorly performing teachers, but the principal warns that "moving these teachers out of here could take years."

Meanwhile, principals intent on reform must rally the district's many willing and able teachers to the task. But even the willing and able may need significant re-training.

Today's teachers are probably as prepared—or unprepared—to teach high-level academic content as the teachers of three or four decades ago. But Chattanooga's commitment to teach high content *to all students every day* is a pledge rarely undertaken by schools anywhere.

A "jump start" from grants

Grant funds have allowed the district to "jump start" its professional development agenda, which had grown modestly in the years since Harry Reynolds became superintendent. One Chattanooga school board member says that "before Harry Reynolds came to this district, there was no such thing as staff development."

Every Chattanooga middle school has teachers who have been active in a variety of professional development opportunities and have experienced far more training than they have had in the past. But five days of workshops are not likely to change the habits of a lifetime.

Persistent retraining, mixed with opportunities to applied new skills and ideas, and feedback from expert practitioners is the only way to change teaching on a large scale and reach the goal of involving every student in high-content teaching and learning.

This presents a major challenge to a district forced to support most of its staff training with outside funds.

Socratic seminaring: Nurturing young Platos

If you live in Chattanooga and hear much about what's going on in the public schools, you've heard the term "Paideia."

The Chattanooga School for the Arts and Sciences began using a Paideia (pronounced "pie-day-uh") approach when it opened in 1986. CSAS's success led to a spinoff, the Chattanooga School for the Liberal Arts, which opened in 1992.

Now Chattanooga's other middle schools are working to implement some of the concepts associated with a "Paideia program" in their classrooms.

Reagan Walker, a member of the Focused Reporting Team, explored Paideia "seminaring" in the middle schools during a recent two-day visit. Jann Foster and Chad Wesley are real teachers whose names have been changed, although their schools have been identified.

"How would your life be different if it rained every day for seven years?"

The hands of the sixth-graders gathered in a circle in Jann Foster's classroom at Phoenix II Middle School shot up.

The students were eager to offer their ideas, culled from a Ray Bradbury short story about a group of school children who have endured seven years of rain while colonizing Venus. Foster's students had read the piece on the previous day to prepare for their first Socratic seminar of the school year.

"Put your hands down. And don't talk to me, talk to the group," Foster gently reminded.

"Whoa, this is weird," said one student, befuddled by the notion that he is to address his fellow students rather than the teacher — that he is allowed to look into their faces rather than at the backs of their heads.

But soon, the students' wariness gives way to an engaging conversation about the story, in which a group of school children lock one of their classmates in a closet because she had seen the sun while living on Earth and often talked longingly about it.

They left the girl in the closet during the only hour the sun shone on Venus. She would have to wait another seven years to see it again.

"Would you have locked her up in the closet?" Foster asked.

"No. It wasn't right," said one.

"I disagree," said another sixth-grader. "If she got on my nerves always talking about the sun, and I had never seen it, I would lock her up."

"Not if she's a girl. She's your friend. Maybe if it was a boy," said one girl, espousing a popular tenent of the unwritten pre-adolescent doctrine. But another quickly chimed in: "Oh please, this is the 90s."

Socrates, often described as the greatest teacher in the history of Western civilization, might have chuckled.

Socrates' teaching style

The seminaring format used at Phoenix II is fashioned after Socrates' style of teaching in 5th century B.C. Greece. He did not lecture, but rather taught his students to think by conversing with them. He asked questions, criticized answers and poked holes in faulty arguments. His most famous student, Plato, recorded some of these conversations as *The Dialogues*.

The Socratic seminar has endured some 2400 years and today is one of the pillars of the Paideia concept of education—a philosophy that is shaping Chattanooga's efforts to improve its middle schools.

In a true Paideia school, teachers use three related teaching styles: didactic practices (lecturing) designed to increase students' acquisition of information; coaching, meant to improve skills such as problem solving and research; and Socratic seminars.

Pat Weiss, a consultant from the national Paideia Center who trains teachers in Chattanooga, says "Paideia is about improving teacher content knowledge and integrating subject matter and teaching skills on the spot."

Workers, citizens & learners

Paideia is a Greek word that means "upbringing of a child." Mortimer Adler, an American educator and philosopher, borrowed the word to identify his approach to reforming education, which he described in his 1980 book *The Paideia Proposal*. Adler believes that teachers who learn to use the Paideia approach can succeed in teaching all children challenging academic material.

After the Chattanooga School for the Arts and Sciences—and later, the School for the Liberal Arts—found success with the concept, the district decided to introduce elements of the Paideia method in all middle schools.

Socratic seminaring is a key Paideia technique. Its goal is to help students develop the ability to analyze issues and find ways to solve problems and resolve conflicts. These are skills that are hard to measure with traditional, standardized tests, but teachers say they see students growing as learners.

"The students learn to be expressive in conversation and in writing," Foster said. "They learn to disagree agreeably, and they learn to justify what they are saying. It's not just about spouting opinions, but being able to refer back to text and support your position."

The preparation required of students to be effective in seminaring "has taught both my children, at an age much earlier than I learned it, how to study on their own and how to manage their time for study," said one parent whose children have been seminaring for years at the School for the Arts and Sciences.

"I feel strongly that what it is teaching my children—and what I see other kids their age learning—is how to think critically," she said. "That is developed and maintained through the weekly seminars and the use of the seminar method in regular classes."

One criticism of Paideia in Chattanooga is that most teachers don't use its strategies outside of the seminar itself. "What makes Paideia schools effective isn't doing a seminar on Wednesdays," says a former Paideia-trained teacher. "Creating a Paideia school requires a complete redesign, a rethinking of everything schools do. We are not doing that in Chattanooga today."

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Socratic seminaring (cont'd from page 18)

How the seminar works

Foster does use Paideia principles in all her classes. In her language arts class one September afternoon, for example, she instructed her students to create an "idea map" based on a book they had been reading. "Be prepared to justify your map by showing how it relates to the text," she said.

But the Socratic seminar is the most intense activity used to develop students' reasoning skills.

The seminar "text" can be a short story, a photograph, a work of art, a poem or anything teachers feel would spur thought and discussion.

Sometimes a common text is chosen for the entire student body. Other times, schools such as Phoenix II will choose one text for the 5th and 6th grades and another text for the 7th and 8th grades.

Once a text is selected, teachers "seminar" among themselves to develop effective questions to pose to students. This "prep" is shared with teachers who are unable to attend the preparation sessions.

Ideally, the whole school will conduct seminars simultaneously. At Phoenix II, a seminar is held every other Wednesday during the advisory period, which is the first class of the day. Students receive the text a day ahead to read or study.

First, students and the teacher move their chairs or desks into a circle, and review the seminar rules:

— We are courteous.
— We focus on the common text.
— We listen to one another.
— We share our point of view.
— We refer to the text.
— We avoid sarcasm or "put downs."
— We learn together.

Often, teachers will use a couple of strategies to get the conversation rolling. For instance, in Foster's seminar on the Ray Bradbury story, she began with a "round-robin" technique.

One student told the first few sentences of the storythen another student picked up and continued to tell the tale. The story moved around the circle until it was completed.

Such structure is often needed to get students "warmed up" and to relieve anxiety they may have about the seminar. It's also good way to find out who hasn't reviewed the assignment.

From such jumping off points, the discussion picks up, guided initially by questions the teacher poses and ultimately by the questions students themselves raise.

Foster keeps a tally sheet to record how many times each student participates in the discussion. Students aren't graded, but they're expected to participate, and the tally helps her keep track of those who do and don't contribute. She shares results at the end of the seminar and encourages students to set personal goals for better participation.

When a schoolwide seminar topic is popular, discussion often continues throughout the day. After Phoenix's first seminar in September, teachers shared student reactions to the text at the faculty table during lunch. And students standing in the lunch line could be overhead discussing the rain on Venus.

Willingness, training & practice

Foster has been conducting seminars for more than three years, which makes her a veteran among middle school teachers in Chattanooga.

She says the keys to finding success through the seminar approach are good training and lots of practice.

Usually, teachers participate in a two-day workshop led by Paideia consultant Patricia Weiss, followed up by classroom visits by Weiss or other teachers already proficient in the seminar technique.

Grant monies from the Clark Foundation largely support the seminar training. Many teachers would like to go further and develop the skills to use Paideia concepts in all their classes—if the district can find the resources.

The first step, however, is exposing every middle school teacher to seminaring. At Phoenix II, only a handful of teachers did not have the first level of training when school began. They were signed up for a two-day workshop on seminaring in late September.

Many teachers are skeptical

Training all teachers, Foster said, is essential to making seminaring a schoolwide effort.

Chad Wesley, a teacher at Tyner Middle School, agreed. At Tyner, about half the 40 teachers had not been trained by the beginning of the school year. And it's unlikely that all of them will be trained this year.

"We will have some schoolwide seminars this year, but with almost half our staff untrained, it will make things difficult," Wesley said.

"There was training with pay offered in the summer, but most did not show up. It would have helped to have more teachers ready at the beginning of school."

Wesley and Foster report that many teachers remain skeptical about seminaring. It's not so much a distrust of the method but a disinterest is embracing yet another "reform."

"We've had lots of 'programs' over the years," Foster said. "Some teachers have reached the point where they think 'I don't have to worry. Seminaring will be gone soon enough.'"

Wesley admitted some reluctance on his part. "They came to me and said we'd like for you to try seminaring. I said 'Do what?'"

He went through the training over the summer and met several other middle school teachers across the district like Foster who had been using the method. He was willing to try.

Still, his first attempt at a seminar this year "was a disaster."

"The text was the Preamble. The students just sat there. I couldn't get them to say anything," he said.

Patricia Weiss says part of the problem can be that teacher don't always have the deep knowledge of a text they need to bring it alive.

"So few teachers—really, so few Americans—actually have read the Declaration of Independence, the Preamble, and the like," she says.

Most colleges fill teacher preparation programs with courses that focus

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Socratic seminaring (cont'd from page 19)

on education, not subject matter. This is particularly true for elementary and middle school teacher trainees.

"It is taboo for teachers to talk about their lack of subject matter knowledge," Weiss says. "But the problem is widespread; the problem is not specific to Chattanooga."

Waiting out the silence

Foster worries that if teachers who are reluctant have first experiences similar to Chad Wesley's, "they will turn away and never try it again."

But Wesley was undaunted. He tried again. This time he used a photo of an elderly woman sitting on a bench staring at the man next to her, who was sitting with an overcoat over his head.

"What is the woman thinking?" Wesley asked.

"She's thinking she would like to have that jacket," offered one. "It could be her ex-husband and she's surprised to see him like that," mused another.

"She's thinking he's crazy, and he's probably there 'cause his girlfriend put him out last night," guessed another.

Wesley asks the students to explain their answers. Some point to clues in the photo. Others compare it to situations they have seen on television or in real life. His final question is what would you title the photo? "The Stare, " "The Stranger," and "The Bench" are among their suggestions.

When the 30-minute seminar is over and students move on to their next class, Wesley breathes a sigh of relief and says with a bit of surprise, "It worked. That went better."

The hardest part of seminaring, Wesley reflects, is actually teaching the students how to converse—how to talk one at a time without needing the direction of a teacher, and how to jostle ideas around.

Equally difficult is teaching himself to wait out the periods of silence.

"In my regular classroom critiques, I have been told that I often answer my own questions," he said. "So it's been difficult for me to learn to wait, to let there be silence until a student offers something."

Foster said periods of silence are common to seminaring, but as teachers and students practice and become more comfortable with the process, silence no longer seems uncomfortable.

In her seminar on the Bradbury story, many of Foster's sixth-graders were new to the process. At the start, she asked how many felt anxious about the seminar. Almost every one of the 20 or so students in the circle raised their hands.

Foster let them know she was anxious, too. An hour later, when Foster brought the seminar to a close, she asked students if they were still anxious about seminaring.

"This was cool, man," said one budding Plato. "Let's do it every day."

Mike's story of change

Mike Steagal is a veteran 10-year teacher and a novice at school reform—but he's an enthusiastic learner.

"I had never even heard of this stuff, like authentic assessment and seminaring," he says. "But this stuff is wonderful."

Mike's story of his on-going transition from a self-described "traditional teacher" to a change-oriented professional is typical of many Chattanooga teachers willing to consider new ideas.

Like many of his colleagues, Mike is a Chattanooga native who finished a local teacher education program. Most of his teaching experience has been in Tennessee.

Middle school teachers are often recruited from the elementary or high school ranks. Mike began in elementary and had no specific training for the subject he now teaches—algebra.

In the beginning, he had to work hard to stay a few lessons ahead of his students. "I would go home every night and spend two or three hours studying. Then I had to figure out how to get a group of 8th graders to understand it."

He also has no formal training in adolescent development, curriculum writing, student learning styles, or complex student assessment. Now Mike understands the importance of this knowledge and these skills.

"College just didn't prepare me for the classroom, but I'm willing to work to prepare myself. I guess I see myself as a learner who's had to work hard."

And he has worked hard. In the last year, he's spent over five weeks in district-sponsored workshops and training sessions on student assessment, Hawaii Algebra, and, just this summer, Socratic seminaring.

"I have been a very traditional teacher, because that is really all I knew," Mike says. "But that's true of most teachers who teach school anywhere."

"I had one professor in college who was a wonderful teacher. She was able to demonstrate through her own teaching how to adjust to different students' learning styles and how to coach students to try harder."

The extra training Mike gets through the district's expanded professional development program is helping him move toward the same style of teaching.

"I'm prepared to use groups more and do less lecture. I understand how important it is to start off with what students understand and provide opportunities for students to be teachers. They can communicate with their peers in ways that I cannot."

Part of the reason he's learning to teach in new ways, Mike says, is because he's had the chance "to listen to some wonderful teachers in our district and share ideas. I have learned more in one summer than I have in the past 10 years."

Mike has also become a close observer of good teaching.

"I watched the district's Paideia consultant do a basic seminar class with 6th graders last year. She asked one question, and it carried the entire seminar. The kids were so engaged.

"Everyone was in a circle—including the teacher—and so the kids felt equal. It was not teaching by command but teaching by communication. I always knew that good teaching is about relating to children, but I have not known how to translate that into everyday practice."

"She made it known to the students that their thinking mattered and no one was going to ridicule them for their way of analyzing the text. There was no right answer, in fact there were many answers. It is hard for a lot of teachers to accept this."

Mike is changing, and the school district is helping him change by providing a supportive environment in which he can think more deeply about his profession, experiment with new techniques, and challenge his own traditions.

High Expectations

Educators must believe that all students can master academics

If students are going to master "high content" material and become active learners then teachers and administrators must really expect all students to reach high levels of academic performance.

This is not pie-in-the-sky thinking. A range of research studies show when students (including students who have been placed in remedial or watered-down courses) are presented with challenging content and expected to master it, then they indeed master it.

But the proposition that all students are capable of high academic performance seems to defy common sense. Most educators don't believe it, either.

"If you believe something cannot be done, then you can quit trying to do it," says one Chattanooga eighth grade teacher who is critical of the complacent attitude of some of her fellow teachers.

"If a student doesn't get it the way they want to teach it, then he just isn't capable. That's the attitude."

Maybe you have to see it to believe it. Teachers who have seen high expectations work tell powerful stories.

Dumbing things down

One Chattanooga administrator tells the story of when he was teaching remedial reading and English classes. Students who fell behind were routinely denied opportunities to learn challenging content.

District policy required that all reading books be on the grade level where students were enrolled. The books "were very 'dumbed-down" and didn't come close to matching the interests of students much older than the grade for which they were written.

"Those books were so stupid," he says. "And they had pictures in them that meant nothing to my students. I felt so bad for them.

"I kept struggling, trying to think about different ways to teach them. I started teaching without a text. Then I began teaching them to read with real novels— like *Sounder*—so they would be motivated to read.

"This got me in trouble, because the kids were not even allowed to carry regular books," he says. "But it was worth it, because those students learned to read, and they learned to read good books."

Chattanooga doesn't have this district policy any more, and schools have the freedom to create high expectations for their students. But members of the Central Planning Team estimate that perhaps only a third of the district's 360 middle school teachers believe all students can achievie at high levels.

"Many teachers will agree it is important to push high content—but not with these kids," said one planning team member.

"When it comes to the Paideia seminar, for example, they will say some kids cannot sit in a circle and discuss ideas. They just don't believe the kids have the skills or the attitudes."

Testing and low expectations

Some teachers blame low expectations on education bureaucrats who have emphasized the kind of basic skills material that has appeared for years on Tennessee's state-sponsored tests (TCAP).

"Up until a few years ago there was no curriculum except to teach what was going to be on TCAP," a district administrator says.

The most recent version of TCAP broadens what is tested and doesn't simply test for isolated skills and bits of knowledge. The new test relies more on literature-based reading comprehension and non-routine mathematical problem solving.

But the changes in the test format have not been powerful enough to challenge reluctant teachers to raise their expectations about what students can learn.

A teacher with high expectations values the knowledge and experience each student brings to school, even when it is not the kind of knowledge and experience traditionally valued in an academic setting.

Having high expectations means focusing not just on subject matter and a set of academic standards—as important as they are—but also paying attention to what students actually know and how their current knowledge and experiences can be used as a foundation to learn more challenging content.

Teaching the subject, not kids

A teacher may have a strong grasp of mathematics or science; she may require lots of homework; she may give very difficult tests. But she still may not have high expectations for all students.

"I have some teachers on this staff that really push kids, but they don't understand kids," says a principal at one of the district's schools with a reputation for good academics.

"On one of our teams, one teacher gave zero "Fs," another failed 11 percent, and still another failed 28 percent. I'm not exactly sure what the acceptable amount is, but I think we may be caught up in the idea of teaching the subject and not the kids."

High expectations mean higher content standards, but they do not have to mean a higher tolerance for failure. A teacher with high expectations for students accepts the possibility that students will fail, but believes that most failure will be temporary, and that long-term failure reflects on the teacher as much as the student.

"Look at it this way," the Chattanooga principal says. "If you were going to a doctor, and 25 percent of his patients were dying, you might want to change doctors. That's kind of what I'm saying.

"If I teach something and 25 percent of my class fails, maybe the way I taught the concept was not a way the students could understand it. In order to correct this, we may be looking at

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HIGH EXPECTATIONS (cont'd from page 21)

re-teaching in a *very* different way from the way we taught it the first time."

One of Chattanooga's more traditional teachers, who knows his subject and has a reputation as a very demanding taskmaster, rejects this point of view.

"I teach history one way, and I've taught it that way for 20 years," he says. "Students get it if they want to get it. If I give the students some work for extra credit, or if I give them a second chance, I'm lowering the standard.

"I don't have time to teach this way and that way. We've got to get through World War II before the year ends."

Many educators resist the idea that all students are capable of high levels of performance because they don't know how to teach more than one way. They most often rely on the lecture—and lecture is most effective with a relatively small percentage of students.

Anyone who's been to college knows that a faculty member can know his subject and still fail to teach it well. It takes professional courage for a teacher to admit that his students are not learning because his skills in the craft of teaching are too limited. It's easier to blame students.

One Chattanooga principal offers this example: "A 13-year old breaks into his parents' liquor closet, gets drunk, gets into a car, speeds, and has a serious accident. The ambulance rushes the teenager to the hospital, and doctors gather around an operating table, working feverously to save the child's life.

"No one in that operating room says, 'This child broke in a liquor closet. He was speeding. We'll let him die.

"We don't take that attitude when a child is hurt. Why should we take it when a child is failing in school or doesn't get something the first time?"

"We need quality kids"

Many teachers and principals share the lament of this Chattanooga educator: "We just don't get the quality kid we used to get."

"If we just had the quality kids," these educators say, "We wouldn't have to address some of these problems." No one ever defines "quality" very specifically, but you can take it to mean "middle-class," "from well-educated families," or even "white."

Other teachers and principals have a different attitude. A member of the middle school Central Planning Team expressed it this way:

"Some teachers keep waiting for the students we had 10 or 15 years ago, and they are just not going to get them. They still have not completely faced up to the fact that we have to teach today's students, not yesterday's students.

"So we have kids that come to us behind. That's the way it's going to be—and it's our job to catch them up. If you can't do the job, you need to find some other line of work."

Teachers with high expectations for students must have high expectations for themselves. They must not only be smart and skillful but also self-critical and push themselves and their colleagues to higher levels of performance.

Teachers—and whole schools—must develop the pervasive belief that there is always another way to do something, a maybe a better way.

Developing this mindset requires a lot of "high support"—for students, teachers, and parents.

Middle schoolers and motivation

By the time most students enter the sixth or seventh grade, they show signs of losing their motivation to learn and participate fully in school. Parents and teachers won't be surprised by this finding of education researchers—they've experienced it "up close and personal."

Conventional wisdom has it that this downturn in motivation can be blamed mostly on the dramatic hormonal changes of adolescence. It's not unusual to hear teachers at middle school conferences joke about their students' ability to learn by referring to "raging hormones" and "brain dead" pre-teens. The teachers don't mean any harm, but they can have an effect on teachers' expectations about what middle school students can accomplish.

It turns out that middle school students aren't brain dead after all. And while it may be true that their hormones are raging, that's not the reason their motivation to learn decreases as they enter their teens.

What's really happening, researchers say, is this: As students reach middle school age, they are more likely to believe that achievement is mostly about *ability* rather than *effort*. Some students are smart, and some students are not, the middle schoolers conclude. If you're smart, you don't have to try very hard, and if you're not smart, trying hard won't do you much good.

This kind of thinking is supported by many parents and teachers, and by many school practices that rank and sort students according to their perceived ability. At this age, when adolescents are increasingly likely to compare themselves to their peers and observe how adults make such comparisons, rewarding ability over effort can be damaging.

When teachers and parents fail to value and reward effort, students find it safer to do nothing. Trying and failing can make them look foolish.

Adults who think back on their own school experiences recall many teachers who treated mistakes in school as failures instead of a natural part of the educational process. The common-sense idea that "there is no progress without risk, and no risk without some failure" seems to have been forgotten.

Research makes it clear that students in the middle years are more likely to be motivated when they work on "task-focused goals," where they are trying to master a skill—not "ability-focused goals," where some students are expected to outperform others.

Students who work on task-focused goals are more likely to learn to connect new knowledge with their old knowledge and be able to determine relationships among different types of knowledge. And, these skills—once developed—build a foundation for a lifetime of continuous learning.

High Support

Students, parents, and teachers need lots of support as schools reform

Students, parents, and teachers need broad, on-going support as a school system goes about creating opportunities for high content and high expectations. *High support* is the third element in the Chattanooga Public Schools' middle school reform agenda.

For school reform to work, the school system must provide ample opportunities for teachers, administrators, and students to learn new practices, try them out, and assess their worth.

The school system must also organize the school calendar, the all-important daily schedule, and other logistics so that teachers and administrators can better work with parents and students to meet their academic and social needs—both inside and outside of the classroom and school building.

The system must form partnerships with a variety of groups outside the schools and develop new forms of communication and learning in order to make all of this happen.

Since the reforms posed are complex and cannot rely on routine decisions, mandates from the top just don't work. The system cannot mandate that all teachers teach differently, that all parents raise their children differently, and that all administrators supervise the schools differently.

The system can *support* change, but it cannot dictate change. It can lead, but it cannot drag people to the mountain top.

To bring Chattanooga's schools to the high point where all children are successful, the Chattanooga community—administrators, teachers, civic leaders, and most importantly, school board members—must remain absolutely committed to high support.

Teacher Support

Chattanooga's efforts to create quality professional development experiences for teachers border on the extraordinary. They include workshops in Socratic seminaring and Hawaii Algebra, study groups that focus on a range of issues from portfolio assessment to learning styles to peer coaching, school-based planning retreats, and a middle school teachers network. All offer significant opportunities for teachers to learn new, more effective practices.

"We now have good professional development," a teacher says. "We are beginning to learn new teaching strategies, and people who have never showed up before are showing up."

A three-day districtwide leadership conference in late June offered principals and assistant principals a chance to exchange ideas and information about two dozen district initiatives,

(continued on page 24)

Students must be challenged and supported

Self-concept and self-esteem change dramatically during the middle school years and can have a powerful effect on the choices students make—both academically and socially.

The typical organization of a high school or junior high school can be a real problem for many middle schoolers as they make the transition from elementary schools, which are often more child-oriented. Middle schools were developed with the idea that these students need a transition from elementary to high school that recognizes adolescence as a critical developmental stage distinctly different from the later teens.

For middle school students to achieve at high levels, the adults in the school must support students in a number of ways. The Chattanooga plan for school improvement speaks about challenging students with high academic content, and about how educators' high expectations must accompany high content teaching. The third element in the Chattanooga plan, high support, assures students that, even as teachers challenge them academically and expect high performance, they are valued, cared for, and secure in their school environment.

This is why many middle schools are organized in teams or "families" that assign a group of students to a team of teachers for the whole school year. The Chattanooga middle grades are using the team concept, although it is new in many schools.

Middle school teams in Chattanooga have organized some common strategies to support students, including field trips, cooperative activities, team incentives for good behavior and for turning work in time. Too often, however, these activities are add-ons and are not related to efforts to increase academic content and expectations.

"We have tried to do more with our team," says one 6th grade teacher in Chattanooga. "We have done a lot more than we have ever before. We even took our entire team on a camping trip. We had pizza, coke, and saw a movie."

Do these strategies support team unity and greater student engagement in learning high content? The answers are somewhat ambiguous.

"I guess it worked; the students liked it," one teacher told us.

"You have to realize that many of these students never do anything like this except at school," another said.

"It was okay, but it took a lot out of us," said a third teacher. "I am not sure what it really means."

Chattanooga educators need to spend more time thinking about how support activities can be enjoyable for students, demonstrate care and concern, and still link back to the push for greater student achievement. One important step will be to connect the work of school guidance counselors with the high content/high expectations focus of subject-area teachers.

HIGH SUPPORT (cont'd from page 23)

from Algebridge to Writing to Read. Last February, a national staff development conference at the city's civic center attracted a hundred or more Chattanooga middle school teachers.

Teachers from the six Paideia middle schools spent up to 10 days during the summer learning how to apply Paideia principles in their classrooms every day.

And continuing foundation funding from the Clark Foundation and others makes it possible for individual schools to have access to unprecedented professional training opportunities.

For the district's middle school teachers, many of these professional development experiences have been "exhilarating and energizing." They are a significant step toward the recognition that teachers need—as one of the district's consultants noted—"a great deal more planning and preparation time, which is not highly regarded in many school districts in America."

The district is beginning to recognize the intricacies of effective professional development. In fact, district documents that outline professional development plans increasingly reflect "best practices" from recent research.

No longer is professional development relegated to those few days at the beginning of the school years when, as one Chattanooga administrator put it, "teachers are frantically getting ready for a brand new bunch of kids." There are more opportunities for teachers to drive their own development.

Teacher teams

One strategy Chattanooga is using to support teachers who are trying to change their practice is to provide more planning and preparation time through *block scheduling*. Instead of having a teacher teach five or six classes of different students each day, schools group classes so that teachers can have two 45-minute planning periods—one for individual work and one for team work.

"Two planning periods are wonder-

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Study groups help teachers escape their "egg-crates"

"Two years ago we only had six teachers in a study group at our middle school," said Pat Questor, as she reflected on the changes in teachers' professional development in the Chattanooga City Schools.

"Now, 100 percent of the teachers in my school are involved in some kind of study group, getting together as early as 6:30 a.m. and as late as 10 at night."

When teachers begin to find the time—even scarce personal time—to study together, you can be sure that something positive will come out of it.

A group of teachers and district staff dreamed up the study groups last year, and the groups have already been a powerful catalyst, helping teachers escape the isolation of their egg-crate classrooms. In these frequent meetings, teachers learn from each other as they strive to blend educational research into their everyday classroom teaching.

Drawing on the power of what researchers call *social learning groups*, teachers are reading and talking about the best ways to teach and deciding for themselves how they can best help students achieve.

Three study groups, made up of teachers from each of Chattanooga's 11 middle schools, are working on issues that grow out of the district's reform plan: Socratic seminaring, interdisciplinary teaching, and student assessment.

The Assessment Study Group has been at work for almost a year now and—in an encouraging example of public-private school contact and cooperation—includes faculty members from McCallie School.

Pat Questor (not her real name), who serves on the Assessment Study Group, says that until recently teachers have been passive observers of attempts to change and improve the schools. Study groups represent a major step forward.

"We were used to sitting in the back of the room during the workshops the district would put on," she says.

"That's right," adds another group member. "You would have to bring your magazine to read because you knew it was going to be boring and useless."

But the study group work "has been terrific," Pat says. "We control the agenda and drive what we are learning. The district provides some initial goals and objectives and some resources and support, but we are the ones involved in the active learning process."

In fact, says another teacher, the study group learning process lets teachers go after knowledge in the same manner that the middle school reform plan imagines students will go after the knowledge they need to solve problems and answer important questions.

The Assessment Study Group's search for better ways to measure student progress includes an exploration of "portfolio assessment"—a complex method of judging how well students understand and can apply the content they have learned. The pros and cons of portfolio assessment are emerging from experiments in Vermont, Kentucky, and California, and the group follows these developments closely.

"Our plan for change," says one study group member, "includes changing our standards and working with teachers to develop more sophisticated ways to assess the students. This will take time and a lot of marketing—especially to parents and the community."

Study groups can help teachers develop the knowledge they need to support reforms. As they learn more about the best teaching practices, teachers also gain the confidence to speak about what is professionally right and ethical.

Study group members tend to be hard-charging, energetic, reform-minded teachers. They are the system's most open-minded teachers—more willing to search for solutions, and more willing to take some risks. They are also evangelists for the kind of professional growth they're involved in, and study groups are growing.

In time, with support from administrators and the public at large, Chattanooga middle school teachers can be the "community of learners" they need to be.

BEST COPY AVAILABLE

(cont'd from page 24)

ful," says a teacher at Hixson Middle School. "In all the years that I have taught I never had it before. We have found that there are so many ways that we can support each other—I could have never imagined."

Why do teachers need this much time and support for planning?

"Every group of students will have different personalities and different achievement levels," says a Chattanooga middle school principal. "The activities and strategies that work in one group may not work in another group.

"It takes real training," he says, "for teachers to figure out how to tailor what they teach to a particular class and to particular groups of students."

Successful middle schools also learn to increase their flexibility in arranging class schedules. These schools make it possible for their middle school teams to vary the amount of time devoted to a particular subject, topic, or theme on a given day. Some Chattanooga middle school teams are doing this now, but not nearly enough.

"We are not yet able to adjust our schedule day to day to meet particular needs that come up," says a principal. "If we need the extra time in math instead of language arts on a particular day, then why shouldn't we be able to make that decision? But we have to give our teachers the training to do it right."

The bridge down the road

If only the other 15,000 school districts in America would take teachers' professional development as seriously as Chattanooga. Few districts would rally the forces necessary to host a national conference on middle schools or support the creation of study groups.

Unfortunately, most of the dollars now used to fund the district's expansive learning efforts are coming from foundations and other grants.

One of the district's most reform-minded principals says that "the Clark Foundation support has allowed us to begin doing some things again—like staff development and conferencing—that we no longer had the funds to do out of our own budget."

While the school board totally supports the emphasis on professional development, several members admit that they are at loss as to how they would support such professional development if they had to rely on the district's regular operating budget.

"Neither the state nor the county will provide the professional development dollars we need," one school board member said. "The last couple of years we have had to focus on making sure that each class had a set of textbooks."

So what's the future of professional development? "We'll have to cross that bridge when we get to it."

Getting beyond housekeeping

When a team of teachers meets for 45 minutes four or five days a week, some of the time will be spent on practical matters. And the ability to communicate regularly about the details of school life heads off lots of problems that can sap a teacher's and a school's energy.

This kind of communication is taking place among teachers in Chattanooga's middle schools at a level never accomplished before. But the more challenging kind of teamwork—where teachers work together to design interdisciplinary study units, plan instruction across the subjects they teach, and coach each other on successful teaching strategies—is still not occurring on a regular basis at all schools and all grade levels.

At an eighth-grade team session on a Wednesday morning, five teachers sit in student desks listening as their team leader shares information from the weekly schoolwide team leaders' meeting the day before. Most of the information relates to school "housekeeping."

Several teachers are unhappy about a scheduled field trip to "an island covered with poison ivy and three feet deep in bird poop." The trip is on orders from the central office; the memo is read as several teachers groan and cast their eyes to the ceiling.

When the conversation ends, the teachers turn to discussions of individual students. One has been absent because of a wreck and the problem may need to be referred to a social worker. Another student is in a mental hospital after running away. They talk about a problem with a substitute teacher who has trouble managing their students. How they can work with the students to get them to behave better when the school is forced to use this substitute?

One team member will be away at a conference for two days. The school magazine sale is underway. The team needs to follow up on report cards that have not been turned back in. "In advisory, you might want to go over test-taking skills for the TCAP because it's coming up soon," the team leader says.

Is the team concept working? "It's been very valuable for us because we know a lot more about what's going on and we can discuss individual students," the science teacher says.

Will the team concept lead to more teacher management over the school's instructional program?

"We have a saying around here," the math teacher replies. "We certainly do have shared decisionmaking. The central office makes the decision, and then they share it with us."

Chattanooga's middle school teachers have made great strides over the last year in learning how to work with one another, plan together, and to collectively get to know their students. But many teams have not figured out how to turn the problems they identify into comprehensive strategies.

There's not enough time to debate good instructional strategies; to examine new curricular materials; to analyze school practices. Many say they have not been prepared to use their time well. Without further direction and support, they will continue to fill their limited time on an overabundance of tasks related to parent contact, students' social problems, and the like.

Even worse, perhaps, is the likelihood that unless the work of teams becomes more focused on reform, team meetings may simply serve as places where teachers reinforce each others' resistance to change.

PACE sets parent involvement standard for Chattanooga

When it comes to parent involvement, the Chattanooga city schools may prove to be a trendsetter.

"We must find new ways to give parents and families the support they need to help their children grow," U.S. Secretary of Education Richard Riley said in his first State of American Education address earlier this year.

"We must encourage parents and others who care about young people to act as mentors and tutors; to instill in every child a love of learning."

In partnership with the Chattanooga school system, a Chattanooga community group—PACE—is already working to make this happen in the city's middle schools.

The importance of family involvement in student achievement is indisputable. Researcher Joyce Epstein has spent years working to understand the connections between student success and parent/community involvement.

"Encouraging, involved parents have children with more positive attitudes about school and higher aspirations for the future," Epstein says.

She and her partners at the Center on Families, Communities, Schools, and Children's Learning find successful school-community partnerships in every kind of community—from well-to-do suburbs to inner-city neighborhoods that are often stereotyped as indifferent to what goes on in school.

Parents need schools' help

"Data from the most economically depressed communities reveal that low-income parents want their children to succeed," Epstein says, "They need the school's help to know what to do with their children at each grade level."

Too often, however, schools don't do a good job connecting with parents and other community members. Principals and teachers may feel they don't have the time, the skills, or the resources to bring parents fully into the education process.

What's more, in poorly managed schools, parents may represent a threat to the status quo. It's easier sometimes to blame problems on parents who don't care.

The Clark Foundation agrees with Joyce Epstein and Secretary Riley that parent and community involvement is vital to student achievement. That's why the foundation decided to invest in the work of an independent non-profit Chattanooga community organization called PACE or "Partners for Academic Excellence, Inc."

Working cooperatively with the Chattanooga schools, PACE has established a parent support program in six middle schools, with a single goal: to enhance the academic performance of students by actively involving parents in the education of their children.

Paid parent coordinators

The PACE program began in early 1994 with part-time, paid parent coordinators at Dalewood, East Lake, Hixson, Lookout Valley, Orchard Knob, and Tyner middle schools. The program also maintains a relationship with coordinators at other middle schools who are paid by the school system.

The PACE program hit a few bumps in the road during its first semester as coordinators worked out relationships with principals, teachers and parents. But the coordinators' degree of activity has been impressive.

The coordinators began to contact parents, arrange teacher-parent conferences, mail newsletters and other information home, and generally make themselves visible. They were most successful in schools where strong principals made a personal commitment to increase parent participation.

By the beginning of school this fall, most coordinators had secured a room in the school to use as a "parent center." A large, comfortable room with a coffee pot and a place to sit and talk can be a critical element in drawing often reluctant (and in the past, sometimes unwelcomed) parents closer to the center of school life.

Annie Hall, PACE's executive director, believes the coordinators are already making a difference. She cites the example of one coordinator who began in an out-of-the-way room in the back of the school but didn't let that slow her down.

"She would hang around the office and see parents, who are there because their kids are in trouble, and she began to meet parents that way," Hall says.

"The teachers really appreciated her presence. The principal was dealing with discipline problems day in and day out, and I think he was glad to have this person that parents can relate to."

Parents feel ownership

"She invited parents to come down to her office after a meeting one day," Hall recalls. "The parents came in and sat down in the chairs and said 'so this is the parent center,' and you could tell that they took immediate possession. It was their room, and they just felt like it was their little corner of the school."

Many parents can be coaxed into the school, Hall believes, but "there's a real need for them to be welcome and wanted. It seems so simple. And yet we have such a hard time building these kinds of relationships between schools and parents."

PACE and its coordinators have an ambitious agenda planned for the 1994-95 school year, including the distribution of parent handbooks and the beginning of a program aimed at helping parents help their students with school work. The program, called PASS (Parents Assuring Student Success), is described as "a long-term, parent-friendly, skill development program." It focuses on study skills that parents and children can learn about together.

Successful parent programs need steady support from individuals who have these programs as their major concern. PACE's parent coordinator model has great promise. With a strong show of support from district leaders and school principals, it can have a major impact on student achievement.

A recent decision to cut Chapter I funding for three parent involvement programs in the district raised questions about the school board and central office commitment to parent involvement's place in school reform. But the board did agree to keep coordinators at several other middle schools. That's encouraging.

Stronger school-college connections key to long-term reform

When it comes to middle school reform, or school reform in general, the Chattanooga City Schools' support from local colleges and universities is not what it should be. Currently, the strong collaboration necessary to increase opportunities for teachers to learn new content or cutting-edge methods of teaching is missing.

District educators say that, for the most part, new teachers are being prepared in very traditional ways at local colleges and universities—a real "weak link" in the chain of reform given that nearly 70 percent of the district's new teachers earn their degrees from these institutions.

Too few local university faculty know much about Chattanooga's middle school reform agenda. One district administrator complains that very few local faculty are involved in the district's efforts to improve.

On the other hand, she says, "I hear that the college professors that work with interns and student teachers are always criticizing our schools. So with that attitude, what kind of help could they be?"

Some teachers complain that the local university "just does do not offer classes—like on Saturdays and later in the evening—when we can take them." A district administrator says the university "has been asked to offer classes later because our teachers work late into the afternoon, but their faculty won't teach the courses at that hour."

A university faculty counters that "we would offer the classes if they would take them."

Whoever's right or wrong in this debate, serious communication problems obviously exist between the district and area colleges and universities. Both sides could gain from a mutual "study group" organized to sort out the issues and examine some of the promising steps being taken to improve school-unversity relationships in places like South Carolina. There, schools in more than a dozen districts are working with colleges and universities and the National Center for Educational Renewal to link teacher education and school reform.

Should the school district and the colleges succeed in opening a constructive dialogue, they will also want to explore the work of the National Board for Professional Teaching Standards. The National Board has created a series of complex assessments for identifying highly accomplished teaching in a variety of subject areas and grades.

The work of the National Board is still in the development stages, but, over the last few years, it has gotten significant business and political support. Most recently, the National Board has field-tested two middle school certification examinations—each of which support the work and intent of Chattanooga's middle school reform agenda.

Broader community and business support would make the job of school reform easier

Pete Cooper sits in a cramped office at school district headquarters on West 40th Street, sharing his views on school improvement in Chattanooga.

"If there is one word that can summarize the changes in the Chattanooga public schools in the last five years it is *vision*," Cooper says. "Paideia has had a part in it, the administration has had a part of it, and the community impact has had a part of it. But it's vision."

The public has been slow to see the changes, says Cooper, who left a career in banking to serve as chief executive officer of the Chattanooga Community Foundation.

"I think we used to have worse schools than the public perception, and now we have better schools than the public perception. But we have not turned the corner on public awareness and broad community support."

Cooper is one of several business and professional leaders who have agreed to spend part of their evening talking about Chattanooga school reform. They are jammed around a small conference table, wearing knit golf shirts and casual slacks.

Jim Vaughn, chief executive of the Chattanooga Chamber of Commerce, talks about the need for the schools to do a better job convincing business leaders of its determination to improve.

"Business people are among the first who say we don't want to put more money into something we don't think is working, or to say let's fix it and then put the money in it," says Vaughn.

"Or they'll make the argument that there's plenty of money, and it's just being spent in the wrong places. That is what you will hear from business and industry, including our members.

"I think the business people want to help, but they don't always know who to help and how to help," Vaughn adds. "The school system has not always done a good job of figuring out how to take advantage of the support that's available in the business community—or to convince the business community that they're doing a good job with what they already have."

Asked to measure the Chattanooga schools progress, Cooper says, "We are not where we need to be, but we are certainly not where we were.

"We have had schools that routinely assumed that their students would not succeed. We don't have any schools like that now. We may have some spots in schools where that is happening, but I think the vision of the system has changed dramatically. I think that's where we have made progress.

"Once the vision changes," Cooper concludes, "I think the other things like curriculum and parental involvement will change too. It's all a very long task, not a short-term endeavor, and strong, sustained support is critical."

THE FOCUSED REPORTING TEAM

Barnett Berry is an associate professor of educational leadership at the University of South Carolina in Columbia and the author of several books and studies on school reform and teacher policy. He earned his doctorate at the University of North Carolina at Chapel Hill and he has worked as a consultant with the RAND Corporation, the Southeastern Regional Vision for Education (SERVE), the National Center for Restructuring Education, Schools, and Teaching and other groups. His two children attend the Columbia city public schools. A former teacher and coach, he is currently involved with a concerned parent group determined to change his son's middle school.

Herb Frazier is a senior reporter at the *Post-Courier* in Charleston, South Carolina, covering education and health. He has been the recipient of numerous journalism awards, including South Carolina Journalist of the Year, and received the prestigious Michigan journalism fellowship in 1992. He recently received fellowship from the National Association of Black Journalists to visit Africa and write about the connections between the people of Sierra Leone and the African Americans living on the sea islands of South Carolina. Frazier has reported from Japan, Germany, South Korea and Rawanda. His three children attend the Charleston city public schools.

Patricia A. Graham lives in Charlotte, North Carolina and is associate dean and director of graduate studies for the College of Education at Winthrop University in Rock Hill, SC. A former elementary school teacher, Dr. Graham has been heavily involved in designing comprehensive programs for school reform and works regularly with the National Center for Educational Renewal on reform of teacher education. Her two children are graduates of the Charlotte-Mecklenberg public schools.

Anne Lewis is one of the nation's most experienced and widely read freelance education writers. The author of a monthly Washington column in *Phi Delta KAPPAN*, the leading U.S. education magazine, Ms. Lewis spends much of her time visiting schools across the nation and writing about what she finds for such organizations as the National Alliance for Restructuring Education, the New Standards Project, and the Edna McConnell Clark Foundation. She is the author of several books, including *Restructuring America's Schools; Making It in the Middle; Gaining Ground: the Highs and Lows of Urban Middle School Reform 1989-1991*; and *Changing the Odds: Middle School Reform in Progress, 1991-1993*.

John Norton is project editor and vice president for information at the Southern Regional Education Board in Atlanta. His reporting career spanned 15 years, covering public and higher education. In 1984 he won first prize for investigative reporting in the National Education Writing Awards competition. From 1986 to 1990 he served as director of a university-based teacher development program. He is vice president of the national Education Writers Association. His daughter has attended public and private schools in Atlanta.

Malinda Taylor teaches sixth grade language arts at E.L. Wright Middle School in Columbia, SC. From 1990-93, she served as a teacher fellow at the South Carolina Center for Teacher Recruitment, directing a statewide middle school program aimed at recruiting more minority students into the teaching profession. During the 1993-94 school year, Ms. Taylor was a delegate to the National Teacher Forum sponsored by the White House and the U. S. Department of Education.

Reagan Walker is an education reporter who recently left the Nashville *Tennessean* to join the Atlanta *Journal-Constitution*. Winner of many education writing awards, Ms. Walker completed a Gannett Newspapers fellowship at *USA Today* in August. She has also covered state and local public school issues for the Jackson (MS) *Clarion Ledger*. A graduate of Austin Peay University, she began her education writing career as a reporter for *Education Week*, the nation's leading education newspaper.

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Spring/Summer 1995

School Reform in Chattanooga

An independent report on middle school reform in the Chattanooga Public Schools

Can Chattanooga merge its schools and save them at the same time?

To hear some people tell it, merging the county and city school systems of Chattanooga is going to be a disaster. That's all there is to it—end of argument.

The date of the impending doom is well-known: July 1, 1997. The exact nature of the calamity is less clear.

If you're a black inner-city resident, you may subscribe to the widespread theory that some city schools will be closed and children will be bused into the county for racial balance. Or that children will remain in the city schools, but the county will cut the school budgets and send the money out to the white suburbs.

If you're a middle-class county resident, you may also worry about busing, fearing an influx of inner-city students who will drag down the academic performance of your schools. Rumor has it that the waiting lists of the county's private schools are growing longer.

If you're a teacher in the county, you may worry that you'll be sent to the city. If you're a teacher in the city, you may harbor one of two hopes, depending on your commitment to the city schools: either that you will *not* be replaced by a teacher from the county—or that you'll be sent into the county and relieved of the obligation to teach low-performing students in some of the poorest areas of town.

Some city residents worry that the county school administration will dominate the new system. And some county residents worry that city administrators will have key positions in the merged district, and that their presence will somehow lower the quality of the schools.

"The rumor mill never stops grinding," says one community leader active in education. "A lot of the rumors don't add up to much if you think about them with a clear head."

The powers-that-be—whether they are school officials, county politicians, or influential business leaders—are pretty much agreed that forced busing is highly unlikely (the community is not under a busing order), and the city school closings of a few years ago make further closings impractical.

Massive transfers of teachers are also unlikely; the city's shrinking supply of black teachers (a national phenomenon) has already had the effect of "whitening" the teaching force in the mostly black inner-city schools. What would be the point of sending black teachers to the county, or white teachers to the city, in any significant numbers?

Whether resources shift away from city schools toward county schools is something only time and politics can tell. Assuring equity will be a long-term community responsibility. "I think we have enough watchdogs to kept that from happening," the community leader says.

A more hopeful scenario

An influential group of Chattanooga leaders has a much different vision of the future of Chattanooga's public schools, one characterized by hope, not fear.

They see a once-in-a-lifetime opportunity to build a "world class" school system from the ground up, using the merger as a way to focus the community on what it really wants from its schools.

(continued on page 2)

Who we are and why we're doing this:

The Focused Reporting Project

Educators in the Chattanooga Public Schools are attracting national attention for the work they are doing to improve the city's middle schools.

The Edna McConnell Clark Foundation—a national leader in middle school reform—has agreed to invest heavily to help Chattanooga develop middle schools where all children succeed.

The Foundation has asked us to report to the community on the school districts's progress towards its own goals. This is our second report.

We call ourselves the "Focused Reporting Project" because we've put together an unusual reporting and writing team, combining elements from journalism and education research.

As the schools and the community go about the important work of school improvement, it helps to have some feedback from the outside. And the best time to give communities feedback about school change is while the change is underway.

It's not our job to make the school district look good or bad. We write about middle school change in as clear and straightforward a way as possible. Our audience is not just educators, but parents, community and business leaders, voters and taxpayers—anyone who has a stake in better schools.

If you would like to comment on our work or receive a copy of our October 1994 report, contact Dr. Barnett Berry, College of Education, University of South Carolina, Columbia, SC 29208. Our Internet address is *FocusedRP @aol.com*.

Can the merged school system become "world class"? *(continued from page 1)*

A steering committee formed by the Public Education Foundation and led by PEF chair and *Chattanooga Times* publisher Ruth Holmberg is already working to discover the educational standards Chattanoogans believe in and will support. In addition to the PEF board of directors, the group includes former Hamilton County chief executive Dalton Roberts, black community leader George Key, and others.

"This is the only board I'm serving on now," Roberts says. "I've given up my seat on everything else. What happens with this merger will say a lot about Chattanooga's future."

The Foundation recently distributed more than 110,000 questionnaires to city and county residents, asking for their ideas.

"We are not just merging Chattanooga and Hamilton County school systems," reads the letter accompanying the questionnaire. "We have a chance to build a brand new school system, one that previously did not exist and one that can stand with the best America has to offer."

The Foundation has already received hundreds of responses and expects thousands more in the next month. Community forums, one-on-one interviews, and other strategies are being used to sample community opinion.

Looking through some of the questionnaire responses, one is struck by the thoughtfulness and the consistent themes.

"Balance rote skills such as grammar and math with critical thinking and problem solving," writes one person identified only as a community resident.

"Teach them to think and ask questions at whatever level their capabilities," writes a "former public school parent."

"Challenge and motivate students—demand lots from them—we must have IDEALS for the new system," suggests a UTC professor.

All the feedback will be put before a planning group created by the PEF steering committee. The planning group, which will likely split up into subgroups to ponder major issues, will bring its recommendations back to the steering committee. The steering committee will produce a blueprint for the new system and present it to the newly constituted county school board sometime next winter or early spring.

Will the new school board accept the PEF plan? No one can say. The board's exact composition won't be known before elections next March.

"The PEF and the committee (must) emphasize in the strongest terms how important the 'new' elected board will be," wrote one community resident on her PEF questionnaire. "That board must represent all points of view in our community . . . (and) the community must be aware the board will select the superintendent."

If the steering committee has done its job and designed a plan that rings true with the community, then the new school board will surely have to take the proposal seriously.

What does all this have to do with middle school reform?

The middle school reforms being attempted in the Chattanooga city schools, with help from the Clark Foundation, represent one of the system's most significant efforts to create high standards, high expectations, and high support for all students.

After two years of trying to improve, many of the city's middle school teachers and principals—and some central office administrators— have valuable knowledge to share about the hard work of school reform.

Hamilton County is not involved in a school reform effort of this magnitude. Although the county has some experience with school-based decision-making, our interviews suggest county educators are just beginning to think about what it means to set high standards for *every* student, and to search for the best methods to reach those standards.

Although some Hamilton County teachers know about the city's innovations and are anxious to connect with the teachers involved in them, there remains some air of superiority among county educators that could prove counterproductive as the two systems begin (as one science teacher puts it) "our docking procedures."

It would be a mistake for the county's teachers and principals to assume they have a vastly superior education system. Our research, interviews, and classroom observations suggest otherwise. The chief difference today may be the kinds of students the schools in each system are expected to teach.

In fact, we would go so far as to say that, in middle schools at least, the city's

(continued on page 3)

Middle school may be the last chance for some young people in today's cities

In many cities, middle schools are the forgetten schools. They are "lost in the middle" between the elementary schools, where parents are more likely to be involved, and high schools, where prep sports and other extra-curricular activities draw more public attention. But a good school system must have good middle schools.

The middle school years are a difficult time for most young people, and some educators will say that at this age academic achievement has to come second to emotional development. But many urban kids "make it or break it" in middle school—either they get the skills they need to succeed in high school (and life); or they fall so far behind that they drop out, or drift through high school with little hope of future success.

Middle school may be the last chance for some youngsters to achieve. They need to be challenged—and supported—to do so.

First test of cooperation will come this summer (continued from page 2)

teachers and principals are much more engaged in school improvement. Perhaps the city's educators are searching for better ways to teach because they believe they *have* to try harder. Whatever the reason, it's beginning to pay off in some classrooms and across some schools.

No one in the city would claim that they've found the magic key, but they are at least knocking at some of the doors.

Most Chattanoogans are familiar with innovative programs at the Chattanooga School for the Arts and Sciences and the School for the Liberal Arts. Exciting things are beginning to happen at 21st Century Prep (the "EFG" school in Brainerd). And pockets of teachers at Phoenix II, Hixson, and many other city middle schools are challenging and exciting their kids about learning.

Help the two systems build bridges to reform

It would be a mistake for the Chattanooga education community to slip into a verbal war over who's doing the best job. The fact is that employers in Chattanooga say they are not fully satisfied with the products of either school system.

Outsiders who want to see the schools improve—the Clark Foundation, the Public Education Foundation, and the city's civic and business groups—can help lay the groundwork for the new system by promoting interaction between teachers, principals, and administrators in the two systems *around the ideas of school improvement*.

Some of this is already beginning to happen. Some Hamilton County teachers have been able to attend Clark-sponsored seminars and the Foundation has agreed to allow the two districts to apply jointly for a new two-year, $1 million Clark grant, with each district contributing a share of the required matching funds.

With its close community ties, the Public Education Foundation is probably in the best position to promote joint professional development activities among educators in the two systems. PEF has made the commitment to raise significant funds to aid the transition. Supporting cross-district visits, idea sharing, joint training, and even county/city teacher and principal study groups could do wonders by breaking down suspicion and building up respect.

The first test of interdistrict cooperation will come this summer as the city and county staffs begin to work jointly on the proposal for the new Clark grant. The Foundation's guidelines are demanding—so demanding, in fact, that Clark representative Hayes Mizell reminded educators from both systems in mid-May that "you have the option to decide not to attempt this."

Clark's rigorous requirements will force some soul-searching on the part of both city and county educators as they decide what they really believe about high standards for all students. If they are able to strike accord, they may be better prepared next winter when the PEF steering committee's challenging blueprint for a new school system is put before them. ◆▽

Goals Focus on Student Performance

These are the goals educators in the Chattanooga Public Schools believe they must reach to improve the performance of all middle school students. (These goals are taken directly from the district's own planning documents.)

- Align revised standards, content, instruction, and assessment to create consistency among what we teach, how we teach, and how we assess to enable students to meet high academic standards.
- Strengthen the capacity of our school-based planning teams to plan, monitor, and assess reforms to enable our students to meet high standards.
- Explore how we can focus and intensify opportunities for teachers and administrators to develop attitude, behaviors, knowledge, and skills necessary to enable students to meet high standards.
- Develop and implement authentic assessment[1] so schools will have a better understanding of what students know and can do.
- Develop processes for assessing reforms that schools and teachers implement to enable students to meet high standards.
- Develop and publish an annual report to the community that clearly sets forth the district's vision for reform, our standards for students, and our results.

[1] By authentic assessment, the district means student tests that are actual tasks worth measuring. For example, tasks would represent the challenges that experts, typical citizens, and workers actually face. Authentic assessment focuses primarily on improving performance, holding students and educators to rigorous and meaningful standards.

FOCUS ON REFORM

Conflicting policies throw up barriers to middle school reform

Keeping a clear focus on middle school reform hasn't been easy for Chattanooga's educators. Progress was slowed—at least temporarily—by the November 1994 vote to consolidate the city and county school systems.

By early spring city educators seemed to be recovering from the shock. With two full school years ahead before the merger, principals, teachers, and central staff are by and large taking the attitude that they can't wait for merger to get on with the work of school improvement.

The district is doing more with professional development. School leaders have listened to some thoughtful criticism about existing guidelines for teaching and learning and agreed to create higher standards. The Clark Foundation awarded the district an additional $250,000 planning grant this year, leaving open the door to a larger, multi-year grant if the district can convince the Foundation it is serious about its commitment to raise the achievement of all middle school students—and knows how to go about doing it.

But some of the city's educators and school supporters are hedging their bets—looking ahead to the new, merged system as a second chance should current reform efforts falter.

"We may need a new beginning," one key player in Chattanooga's middle school reform said. "We are still facing many barriers thrown up by some of our most traditional educators. We may very well need a new system to do what needs to be done."

Barriers make it hard to focus reform on student achievement

In a planning grant proposal to the Clark Foundation last winter, the district's writing team was frank about barriers to middle school reforms—especially those found in the central office and in schools with many low-performing students (see the summary "Barriers to School Reform" on page 5).

These barriers are formidable but predictable. Large-scale school improvement is difficult—so difficult, in fact, that very few school systems and communities can claim to have achieved it. Those that are making significant progress have a broad understanding *at the top* of the complexities of change and the level of commitment required to move an entire school system (and community) to support and accomplish change.

While there are many individuals in the Chattanooga system who have this understanding, it is not pervasive at the highest levels of school leadership.

More and more Chattanooga educators are asking tough questions about the commitment to school reform at the top. "Perhaps we are not making more progress," says one district educator, "because the powers-that-be are not willing to truly question the conflicting policies they have created."

Conflicting policies

A few years ago, Linda Darling-Hammond (a nationally known expert on school reform) wrote about the difficulty California schools experienced when they tried to make major changes in their schools.

New policies designed to reform schools don't land in a vacuum, she said. They land on top of other policies. Because schools and their districts rarely do away with old policies as they create new ones, policy clashes are just about inevitable.

This happened in California; and now it's happening in Chattanooga. As they try to cope with policies that pull on them from different directions, teachers and others on the front lines of change may experience what Darling Hammond calls "*cognitive dissonance*" —something like an intellectual migraine headache.

According to Chattanooga's principals and teachers, there's lots of "cognitive dissonance" around middle school reform as conflicting policies and practices frustrate their work. They say that:

- School transportation policies and procedures—not what's best for learning—dictate how schools are organized and how school schedules are determined.
- The proliferation of special programs for the gifted and others limit educators' focus on core aspects of reform, which call for high expectations for all students.
- Middle school staffing is still based on an outdated formula, not on the needs and goals of individual schools, giving schools too few staff members to accomplish their objectives.
- Teacher and principal evaluation processes are still geared toward traditional classroom practices, not the practices touted in the district's reform literature.
- The link between the district's reform agenda and its teacher hiring practices is weak or non-existent.
- The Chattanooga school board sets policies that direct teachers to change their teaching practices—then places a moratorium on substitute teachers who are used to free up time for teachers to learn new practices.
- Teachers receive considerable training in new teaching techniques (including Socratic seminaring, Hawaii Algebra, and "critical thinking"). At the same time the district purchases and promotes traditional instructional programs designed to raise basic skills test scores that use none of the new teaching techniques.

Losing focus at Alton Park

One particular barrier listed by the district's Clark Foundation proposal writing team is that "many low-achieving students do not have access to high content courses, superior teachers, and excellent resources." Alton Park Middle

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Chattanooga's educators frankly admit to roadblocks on the highway to middle school reform

Educators in the Chattanooga Public Schools who are trying to improve student achievement have identified these "roadblocks" to the district's middle school reform efforts, especially in schools where there are many low-performing students. This list is summarized from the district's most recent proposal to the Edna M. Clark Foundation. The district deserves credit for its frankness.

Barriers in the schools

- Principals do not demonstrate the instructional leadership skills they need to lead their faculties toward dramatic instructional improvement. In some schools, management of programs and operations takes priority over instructional improvement.
- Principals do not aggressively seek opportunities for professional growth and do not encourage their faculties to do so. "Our system routinely makes staff development available to all teachers, but teachers do not apply new knowledge to enhance student achievement."
- Principals do not work with their faculties to find ways to change school structure, operations, curriculum, and instruction to improve student performance. "In some schools, changing the name junior high to middle school has been the only major innovation."
- School-based teacher teams do not function as they should and therefore do not give faculty members an opportunity to share responsibility for school reform.
- Schools have the components characteristic of reforming middle schools (advisories, block scheduling, "houses", interdisciplinary teams, common planning time) but are not effectively using them to foster high levels of student achievement.
- School with large numbers of low-achieving students do not provide challenging and interesting courses. Many low-achieving students do not have access to high content courses, superior teachers, and excellent resources.
- Principals and teachers do not analyze, discuss or use test results and other assessments to change instruction, structure, operations, curricula, or personnel.
- Teachers do not clearly understand what students need to know and are not able to help students and parents understand what students should know by the end of eighth grade.
- Principals and teachers speak the language of school reform, but their practices do not demonstrate a change in beliefs, attitudes, behaviors, knowledge, skills, content, and methods of instruction necessary to raise student achievement.
- Schools with large numbers of low-achieving students have partnerships with parents and the community, but do not effectively use parents' experience, knowledge, and insights to strengthen the schools' programs.

Barriers in the Central Office

- The middle school coordinator's workload includes clerical duties and numerous other responsibilities extraneous to middle school reform. This decreases time and energy available for leading, stimulating, facilitating, coordinating, supporting, monitoring, and assessing the reform of middle schools with many low-achieving students.
- The district's Central Planning Team (made up of principals, teachers, and district staff) and other central office staff need the time and technical assistance to revise the district's standards and objectives to make sure they describe the important knowledge and skills all students should achieve by the end of eighth grade.
- The Central Office staff encourages high achievement but does not hold principals accountable for instructional leadership that stimulates, supports, monitors, and assesses middle school reform at the building level.
- The Central Office Department of Human Resources does not analyze and discuss results of student performance assessments to make personnel decisions that increase the capacities of schools with large numbers of low-achieving students to reach high standards.
- The district provides no incentives to encourage promising new teachers or teachers with experience and documented success to teach in schools with large numbers of low-achieving students.
- The Central Office staff has not found ways to allocate funds for schools with large numbers of low-achieving students so that they have a school-based teacher on special assignment to help with the reform initiatives. A teacher "on special assignment" is one who understands school reform and can work with teachers to achieve the goals of reform. (The district's Central Planning Team recommends a special-assignment teacher in each of the eleven middle schools.)

FOCUS ON REFORM

(continued from page 4)

School is one obvious example of this problem.

"Alton Park is deeply troubled," says one well-informed observer of the school. "There's horrendous education is going on there." Superintendent Harry Reynolds doesn't challenge that assessment. "I can't argue with that," he says.

Although Alton Park has only been actively involved in reform initiatives for two years, the school appears to be giving up on Socratic seminaring, Hawaii Algebra, Lyndhurst Literacy, and interdisciplinary activities aimed at exciting the school's students about learning.

Principal Kirk Kelly says that "the kids like the interdisciplinary units and the seminaring, but right now we have to put most of our efforts toward improving the TCAP scores. We are doing less middle school reform and more direct teaching to get the scores up."

A teacher outside the school who has observed the situation at Alton Park sees the decision to abandon reform strategies as an example of "major contradictions in the system."

"We want reform but right behind it they say get those TCAP scores up. What it takes to get TCAP scores up in a hurry flies right in the face with what we are trying to do with our teaching and learning reforms." (See pages 14-15.)

"We're back to the drill-and-kill worksheet approach to teaching. But it really hasn't worked either. Maybe the kids' scores will go up a bit, but it does not mean they are learning anything."

Superintendent Reynolds takes issue with the assertion that schools cannot prepare students for TCAP *and* work on innovations in teaching and learning.

"Drill may be necessary—even though it does not have to be the predominant mode of instruction," he says. "I am not prepared to say that there is a contradiction between what we are trying to do with reform and TCAP."

Educators who do see a contradiction, Reynolds says, "are too comfortable" or don't understand how to link the drill for specific facts that the TCAP requires with the project-oriented, high-academic-content approach of the reform initiative.

New efforts could focus reform on student performance

The keys to focusing reform on student performance are: (1) defining what students need to know and be able to do; (2) translating those expectations into measurable indicators, and (3) developing a system for reporting progress on whether or not the standards are being met. This is what the Chattanooga school system promises to do in its most recent proposal to the Clark Foundation.

"In the past," one district leader told us, "an elementary school student would learn about dinosaurs at least four times; some middle school students would learn about Egypt and others would not; and we would teach fractions at least a 100 times through the K-12 system."

As surprising as it may seem to outsiders, Chattanooga, like most school districts across America, does not specify or coordinate what is learned from grade to grade to any significant degree. The first step in creating new, more rigorous standards for the system is to have teachers describe what they're teaching now. This "curriculum mapping" has already begun in some schools, and it's produced more than a few "you're kidding" comments as teachers across different grades discover they're teaching things twice—or sometimes not at all.

Are Chattanooga's middle schools "parent-friendly" places?

Will a parent-friendly school have better student achievement? Probably—if it's part of a comprehensive plan to raise standards and expectations for all the students in the school.

Are the middle schools of Chattanooga friendly places for parents? Observers who are in the schools on a weekly basis say the answer, for the most part, is "not really."

"We have two or three principals who are strongly motivated to increase parent participation," says one observer. "But what is more common is that parents and other outsiders who visit the schools feel unwelcome, unwanted, and unappreciated."

At some schools, these observers say, you can walk in, roam the halls, and walk out without ever being asked "what are you doing here?"—much less greeted with the words "We're glad to see you. What can we do to help you?"

PACE—Partners for Academic Excellence—has been working for the past 18 months to make Chattanooga's middle schools friendlier places to be. The Clark-supported program has a parent coordinator in most the district's middle schools. "The coordinators can be lifesavers," says one 7th grade math teacher. "They contact parents for us, arrange meetings, greet visitors and bring them to our rooms—they're even serving on our school-based leadership teams."

PACE has become a valuable asset to the Chattanooga city schools. Unfortunately, the district's total commitment to the program is questionable. District officials say the right things, but they have not taken many concrete steps to let principals and teachers know that good parent relations matter. Until they do, parents will continue to feel unwelcome in some district middle schools.

Focus on Reform

At the same time, local educators who are leading the effort to develop tougher standards are listening to national experts, looking at examples from other cities and other states, critiquing draft documents developed by school teams, and thinking about the professional development that will be needed to help teachers meet the new standards.

The content standards are expected to be developed and presented to the community by this fall. A similar process is expected to be used to create indicators for student progress. And the district's Central Planning Team has outlined specific goals that must be accomplished if reform is to focus firmly on improving student performance (see "Goals" on page 3).

However, the vote to consolidate the schools has some educators worried about the standards revision process. "There is a fear that we will be developing these standards for nothing," says one teacher-developer. "We will have them finished just in time for us to be taken over, and the county educators in charge say, 'we were not involved with developing these standards'."

This teacher and others are counting on the Public Education Foundation, which will help coordinate the merger, to keep the quest for higher standards on course.

According to executive director Steve Prigohzy, the Foundation intends to do just that. This summer PEF will host an institute for educators from both systems to work on meaningful standards that the public can understand. The plan is to invite the local media so they can learn more—and report to the public—about the standards process.

The Foundation is also gathering public opinion about school reform directly (see the story on page 1). Full-scale community involvement is critical to focusing reform—something that few school systems have done well in the past. In Chattanooga, one principal says, "The community is not aware enough of what we are trying to do. We just have not marketed what we are trying to do."

Jack Murrah, president of the city's Lyndhurst Foundation and a PEF board member, agrees. "In the past, the public has not connected to the concept of developing meaningful standards."

Prigohzy believes the community will accept standards that are forthright and clear. "There must be standards that say things like: 'we will do whatever is necessary so that all of our children have developed an appropriate level of literacy by the third grade' or that 'all students will be prepared for higher education without any remediation.' We can sell this to the community."

The PEF hopes to blend the Clark, Paideia, and DeWitt-Wallace Library Power initiatives—adding early childhood and higher education components to help drive the new system.

"Most of the money we raise for this effort will be for professional development," Prigohzy adds. "We can't do what we are talking about doing unless we change the way people think."

Without such a transformation the district may make strides in reform, but ultimately, its educators will lose focus and resort to traditional practices. ☙

How do you know a middle school is reforming?

How will the Chattanooga middle schools know they're changing for the better? According to the district's own middle school planning team, middle schools are reforming when:

- Schools change their structure, operations, and curriculum and instruction to raise student performance;
- Schools advance student learning by giving students opportunities to research and create information on their own (not simply consume it from a book or teacher);
- Schools let students demonstrate that are reaching for high academic standards;
- Schools make sure what they teach is in step with the developmental needs of early adolescents;
- Schools have teachers who are motivated to work together and find ways to increase student achievement as their top priority;
- Schools make sure every student is learning challenging subject matter;
- Schools clearly expect all students to perform at high levels and these high expectations are pervasive throughout the school;
- Schools say exactly what standards students are expected to meet and then assist students and their families in meeting them;
- Schools look outside for help in planning and assessing reform;
- Schools regularly assess how students are performing, and they use this information to critique and improve general operations, curriculum, instructional methods, and professional development.

PROFESSIONAL DEVELOPMENT

Chattanooga teachers are breaking through some training barriers

For most American public school educators, professional development consists of one- and two-day workshops that, at best, provide an introduction to new ideas or skills.

Much in these workshops is unrelated to a particular school, classroom, or students. Once they are exposed to these ideas and skills, teachers and principals usually receive little support in implementing them.

The Chattanooga city schools are making some progress in breaking down this entrenched pattern. Using grant monies from the Clark Foundation and other sources, they are doing a better than average job helping teachers develop professionally.

In particular, the district's efforts to implement new teaching practices through Socratic seminar training and teacher study groups resemble the characteristics of high quality professional development suggested by noted expert Ann Lieberman (see page 9).

Progress in sharpening teachers' classroom skills

Professional development costs money and takes time—ask any business or corporation with a commitment to personnel training. In the absence of local funds for this purpose, the Chattanooga Public Schools aggressively sought outside funding for staff development. Grants have made it possible for the district to "buy time" for teacher development by hiring substitute teachers.

Groups of Chattanooga middle school teachers have had the opportunity to visit other classrooms and school districts, attend conferences, and learn new knowledge and skills during extensive summer training sessions. They've received salary supplements to spend one to two weeks learning more about Hawaii Algebra, the Lyndhurst Literacy model, Socratic seminaring and other teaching strategies.

The extra funds for training have also made it possible to bring in consultants and coaches to work with teachers in the classroom, especially teachers involved with Socratic Seminaring. Some teachers have formed a study group to find ways to make seminaring even more effective.

This spring, the seminaring study group outlined new tasks for themselves that may push reform further down the road. The group is creating standards for good seminars; they are learning about how to assess the seminars, and most recently, they led the first districtwide seminar (based on a selection from a Michael Jordan book).

Having teachers lead professional development means extra work

This kind of grassroots, teacher-initiated effort is the beginning of powerful professional development. But it has a cost. "We are meeting to death," one study group member told us.

"We have so much going on in our building, our calendar is hilarious," said another.

Only by working long hours before and after school, in the evenings, and on weekends can the Seminar Study Group hope to find the time it needs to put its newfound knowledge to use.

Traditionally, most school districts rely on outside experts to "deliver" professional development training for teachers and principals. Experts can help educators think "outside the box" of routine practice, but lectures by experts are only the beginning of a good professional development program.

Chattanooga is taking the important next step that many districts never take: teachers are engaged in conversations among themselves; they are doing their own research into best practice; and they are trying out new ideas and strategies with their colleagues.

About 20 percent of the Clark grant money has been used for consultants, 40 percent has been invested in visits to model sites and well-focused conferences, and another 40 percent has paid for direct training workshops.

"We are getting some of the best professional development I know of," Sarah tells us. There is more follow-up and more attention paid to what teachers learn and how it influences student learning.

Still, the district's much-improved professional development influences only a small percentage of its middle school teachers. Many teachers have not taken advantage of the summer training sessions (despite the extra stipend involved) and most have not taken the extra step of joining a study group.

Even the teachers who have been heavily involved in professional development need more follow-up training and coaching. At some point, group training has to give way to the kind of help that's tailored to individual teachers and their specific needs. While some of this has taken place, too often the district seems to operate from an assumption that all teachers are alike in their prior preparation and their commitment to change.

Some good news about teaching Hawaii Algebra

During our visit, we had lengthy conversations with a group of middle school teachers who have been trained in Hawaii Algebra. The district's goal is to use Hawaii Algebra—which makes students think more deeply about math and algebra than traditional teaching approaches—to teach algebra to most 8th graders.

About names

We have not used teachers' or students' real names in individual stories about change, but all of the stories are authentic. When central office staff members or principals are specifically identified, their real names are used.

Professional Development

Hawaii Algebra has gotten a good reception in the district. Even math teachers who were skeptical when it was introduced last year agree that it can help students develop a better understanding of how algebra works and how the math they learn in school can be used in the real world.

"I've got some inner city kids in my Hawaii Algebra class," says one veteran math teacher, "and they're thinking more deeply about math than I've ever seen. They're getting a real foundation, and I'm proud of that. It's not all of them, but I see enough that I'm excited."

Teachers are usually slow to praise in-service training; so much of it is wasted time. But Chattanooga's 8th grade math teachers give the two-week Hawaii Algebra summer training program very good marks.

"They've done a lot of research to see what's working and what's not working," one Hixson math teacher told us. "It's not one of those courses where they just say 'y'all do this.' You can't teach it unless you're trained; there's follow-up to make sure you understand how it's supposed to be taught. I've been teaching 22 years, and this has been one of the best new courses so far as training goes."

Another 8th grade teacher agreed. "The training was extensive—the books and materials were exceptionally good. We actually did the teaching ourselves. The training was two solid weeks, seven hours a day. And then we had homework to do outside of school."

More help needed to reach algebra program's potential

Clearly, Hawaii Algebra has real potential in Chattanooga. But despite these teachers' positive attitudes, the program is faltering in some schools and classrooms, largely because teachers need more individual help than they're getting to make it work every day with their particular students.

Mike—whose "story of change" we highlighted in our first report— is still struggling to make Hawaii Algebra click with all his students.

"I love Hawaii Algebra. I believe it is the best way to teach," he told us this spring. "But I am not a math major and I have had to really study this stuff to just begin to learn how to teach it. For me, I need to know more algebra. But, you know, even the math majors are having a hard time."

Both Mike and Sheila teach in schools with large numbers of low-performing students. "I've had 34 hours of college math," Sheila says. "But nothing in my college math courses helped me prepare to teach here.

"In college you don't learn how to teach fractions to underprepared 8th graders who in some cases do not read very well. You do not learn this in college nor do you learn enough in the training sessions for Hawaii Algebra."

Hawaii Algebra is designed for classes with students of mixed abilities and levels of achievement. Its creators say that every student can master the challenging content offered through the program. In practice, Chattanooga teachers are having difficulty keeping up the recommended pace, even when they work with mostly "A" and "B" students.

"Barbara (one of the Hawaii Algebra consultants) said her students were anywhere from the 9th percentile to the 99th percentile, and they move at one lesson a day," says Jane, a teacher in one of Chattanooga's suburban middle schools. "I can't do that. I mean I do not have the ability to do that. I lose somebody in the process."

Jane's school uses test scores to group students. Students in the top 10 or 20 percent are placed in the same class and focus mostly on the Hawaii Algebra curriculum—although they don't cover a lesson every day.

Students with lower test scores are also in classes where Hawaii Algebra is used, but there's a greater emphasis on reviewing or "re-teaching" basic math skills.

"We want to encourage as many students as possible to continue taking advanced math classes," Jane says. "We

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How do we get teachers to change what they do?

Most school districts have from one to seven days of in-service education during the school year. Most of these activities are formal presentations outside the classroom. Teachers are introduced to new ideas (e.g., new math standards, new forms of assessment, etc.) in a "lecture" setting.

Some districts also run workshops that introduce new teaching strategies or approaches to teaching a particular subject, and they often hire consultants to handle the "implementation" of these new ideas.

It's important for teachers to learn about new ideas that affect both the content and the processes of teaching. But when these ideas don't connect to the daily life of the classroom, they have a hard time competing with the routine work of teaching, even when teachers are excited and committed to them.

If school districts really want reform to succeed—and really want teachers to change the way they work—they must do a better job integrating new ideas with daily classroom activity. Teachers need regular opportunities to try out and hone new practices ***with their students***. Just as importantly, they need regular opportunities to discuss the results of their efforts with other teachers who share their interest in new ideas.

(Summarized from Ann Lieberman's article, "Practices that Support Teacher Development: Transforming Conceptions of Professional Learning," published in *Phi Delta Kappan*.)

PROFESSIONAL DEVELOPMENT

don't want to set them up for failure. So to pass a child on after just covering the material a little bit where they don't really have a good understanding of it—to me, I can't do that.

"I know that calculation is not the focus of Hawaii Algebra, but the concept of three-fourths and one-half is unbelievably important as a background for success in algebra," Jane argues. "So I don't think I could teach a class with 25 children in it where they were totally mixed up in terms of achievement."

Most Hawaii Algebra teachers in Chattanooga share this perspective to some degree. Part of the problem, they say, are elementary teachers who are poorly trained to teach math.

"I've taught 7th grade," says George, now an 8th grade Hawaii Algebra specialist. "And what happened is that we had to go over the other six years again to get these kids near where they needed to be.

Some teachers have another complaint about Hawaii Algebra. They say that students are too lazy to do the extra thinking it requires.

"They are used to having that direct teaching and someone spoon- feeding them the information," says Mark. "I have had students say to me 'why don't you just teach it to us.' So few other teachers in our school are teaching this way. My students do not want to think."

But other teachers belie Mark's pessimism. They say that given time and teacher persistence students learn to enjoy the feeling of independence and confidence that comes with understanding mathematics at a deeper level.

"I know they don't want to do this type of work at first," says Jennifer, a teacher at another middle school. "But they can come to love the approach, including the group work. It just takes time."

In some way or other, all of these teachers need help learning how to teach differently.

Teachers like Mike need help with the subject matter. It's hard to give students a deeper understanding of mathematics when you don't have a full grasp of math yourself.

Other teachers need a breakthrough idea—some way to get their students beyond their initial resistance. And just about every teacher still needs convincing that you can teach Hawaii Algebra to slower students or to a classroom of students with a wide range of performance.

Jennifer's insight

When it works, why not share it?

Efforts to teach and learn differently take time and require different approaches. Jennifer is a case in point.

"This year I have one group that really likes Hawaii Algebra," she says. "I think one thing that is making a difference is that I am having them write down their thinking process for every problem they solve.

"I didn't have them do this last year. I didn't want to read all those answers. Believe me, it takes a ton of time. But I cannot believe the difference it has made in their ability to get it."

Jennifer's discovery—that committing a complicated process to paper is a powerful way to learn—is worth sharing with other Hawaii Algebra teachers, who are much more likely to listen to a teacher who walks the same halls they do.

Right now, however, there's no good mechanism in place for Jennifer to actually share her knowledge and approach. It's working well with one small group of students—think how many more it might be reaching.

Other reform programs generate concerns about teacher support

Hawaii Algebra isn't the only innovative program in the Chattanooga schools, and it's not the only program where teachers express frustrations and dilemmas.

Patty is an eighth grade teacher who has been trained to use the "Lyndhurst Literacy" methods of teaching. "Lyndhurst Literacy has been real terrific for me and it really built on my college major—English literature. But it does not help in teaching the parts of speech," she says.

"I could really use some help from a colleague that knew my students."

Teacher after teacher in Chattanooga is saying the same thing: ***I need more training in the classroom by trainers who understand my subject and my students.***

One central administrator suggested that "we need less supervisors in central office and more of them in the schools as coaches for teachers to help them implement new practices."

But the truth is that the system's best teachers and trainers are probably not working in the central office. They're in the classrooms. Some of them are beginning to find one another and work together—and where that is happening, students are benefitting. But often it's happening only when teachers go to extraordinary lengths to make it happen.

Because of a slew of commitments—including the need to tutor students before and after school—Mark has not met with other math teachers at his school in over four months.

"I could learn so much if I had more time to interact with really good teachers," he says.

Jane speaks of the need to meet with high school math teachers and explain the Hawaii Algebra approach, which is very different from their own teaching methods. "But where's the time or the means to do it?" she asks.

How can the district build a professional development system that draws upon the expertise and commitment of teachers to work through the problems

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Professional Development

Principals need more support to become leaders of reform

School reform is impossible without the full support and leadership of middle school principals. Are they involved in professional development that helps them change their thinking, perspective, and practices?

For several years, the Public Education Foundation has been sponsoring the "Principals' Collaborative," an effort to help principals from both the city and county systems to learn from national experts and most importantly, from each other.

Steve Prigohzy, director of the Foundation, says that the collaborative gives principals the opportunity "to see schools differently, even when their central office supervisors may be threatened by it."

Rethinking how schools should work and how principals figure into the process takes a lot of time.

Many principals adopt a "sea captain" style of leadership, as though they are masters of sea-going ships, singly responsible for the welfare of passengers and crew, sailing through the rough waters of circumstance and resisting as much as possible the bureaucratic meddling of the landlubbers back in the central office.

This kind of independent style rarely produces leaders who share their opinions and feelings openly, much less look to others for ideas or support.

A few years ago, Prigohzy admits, "I would have said that the principals' collaborative was the biggest waste of time. I did not realize how impatient I have been. I did not recognize how alien they were to each other. But, over time, they are really beginning to learn to learn from each other. Now, they disagree amicably and openly."

Principals and teachers need similar opportunities

Much like teachers' professional development, if principals are to lead school change, then they must have opportunities to talk, think, try out, and hone new practices. They must be involved in learning about, developing, and using new ideas (on a regular basis) with their faculty, peers, and central office supervisors.

For those few middle school principals who have been at reform for the last several years, professional development is beginning to fit this model.

"When I went to my first middle school conference I went there for practical tips," says one principal active on the district's Central Planning Team for middle school reform. "Now I go to think about ideas and to make connections with others I can learn from. I truly have learned to do things differently." His teachers agree.

Two years ago, principals caught some flack from the central office when they began to meet on their own initiative to discuss their work. "That's changed now," says a middle school principal. "We're no longer penalized for getting together."

But, despite some progress—like last summer's school reform retreat for principals—most middle school principals in Chattanooga (especially those outside the PEF Collaborative) have few opportunities to learn from each other. "We need to have conversations with the powers-that-be, and we must learn to be assertive about what we need to lead reform," one principal said.

What do principals need? "As a group we are no where near the kind of instructional leaders we need to be," admits one of the district's more successful middle school principals.

"We do not know enough about teaching and learning," says another. "We don't need to know all that teachers need to know about Paideia, Lyndhurst Literacy, and Hawaii Algebra, but we need to know enough to support teachers."

One principal describes the district's approach to principal leadership as the "assistant manager syndrome—lots of expectations and little authority."

"Some of us are just managers, because that is what we are expected to be," agrees another middle school principal. "They (central office administrators) tell who we can and cannot select as new teachers. How can I be an instructional leader if I can't make decisions about who teaches in this school?"

Any plan for school improvement is fatally flawed if it fails to produce principals who are leaders of reform. This fact may explain why so few school systems have managed to get the job done.

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Teachers as trainers *(continued from page 10)*

that can confound any new program, however meritorious it may be?

Hawaii Algebra looks like a good place to start. Even the most traditional math teachers agree it's a better way to teach. Even the frustrated young teachers with too little preparation and experience teaching math sense its potential to empower students.

In isolated classrooms, some teachers are solving pieces of the Hawaii Algebra teaching puzzle (see "Jennifer's Insight" on page 10). If the district can put these teachers together in a network, figure out how they can share their expertise, and give them some authority to tailor the program to Chattanooga, Hawaii Algebra may become something more than "that Hawaiian thing we used to do."

Outside consultants will still be needed to train new teachers and guard against blacksliding. Accountability for results will be necessary, too. But, in the end, teachers themselves will make or break Hawaii Algebra and every other innovation. They always do. It just makes sense to give them more ownership.

PROFESSIONAL DEVELOPMENT

What does merger mean for middle school principals?

The professional development needs of principals will be even greater with the impending merger of Chattanooga's city and county school systems.

There is much talk about new models of school decentralization in the combined school system—about schools with a great deal more authority to make decisions.

"A really good school-based decision making model creates a level of accountability for principals that they cannot begin to imagine," Prigohzy says.

It also creates a demand for professional development far beyond what either district is providing for principals today. To get the job done, the new school system will need to draw on the principles of the Principals' Collaborative and the notion that principals—like teachers—can be the instigators of their own professional growth.

What Chattanooga Principals Need

Most school districts prepare principals to be managers of bureaucracies, not leaders of school reform.

Researcher Barbara Neufield reached this conclusion after studying the work of middle school principals in Chattanooga and other districts with Clark Foundation grants.

If principals are going to be leaders of school reform, Neufield says, they must know how to:

- Develop and support teams of teachers who work together;
- Show the school how to set goals and plan effective strategies;
- Make the school a place where teachers have the freedom and the support they need to find the best ways to teach;
- Take a measure of the progress of reform

How do principals learn to do these things? They need wise mentors, a good professional development program, and lots of practice. Principals in Chattanooga and other Clark-supported districts have had some of this: they've begun to work more with teachers in planning groups, they've been shadowed and critiqued by outside experts, and they've taken part in professional conferences. They've gained some insight into what it means to initiate and sustain change.

But Neufield reports that these experiences have been limited and are far outweighed by the training principals receive to be managers of bureaucracies—and the time they must spend managing the mundane affairs of school life.

Principals have learned a lot about assessing reform, Neufield found, but they have had little time to try out the new ideas. As time passes without the opportunity to apply their new knowledge principals tend to lose interest in assessment and return to routine ways of thinking about success and failure.

Second, the principals have not yet learned how to create what Clark consultant Don Rollie describes as "faculty-ness." Rollie, who is a nationally recognized leadership consultant, uses the term "faculty-ness" to describe the sense of partnership among professional workers that is familiar in successful small businesses and many college faculties. "Faculty-ness" is achieved with teachers have formed a cohesive group working toward common goals.

Neufield also found that while principals are relying more on planning, they are uncertain about how to use planning processes most effectively.

Finally, Neufield says that principals in Chattanooga and other Clark-supported districts have not made much headway in creating a "learning community" where principals and teachers can critique each other's work in an atmosphere of trust and support.

More principals recognize the importance of creating such a community, where teachers assume the responsibility to help each other and to share knowledge, but few principals have the experience (and sometimes lack the personalities) necessary to make such a large change in their home schools.

Like teachers, principals have had the "introductory course" in many areas of school reform, but they haven't had much follow-up. Neufield offers these ideas to improve principal leadership for reform:

- Districts need to establish benchmarks of quality principal performance.
- Central offices must be less attentive to the management side of the principalship and more open to real educational leadership.
- Principals' professional development cannot be the same for all principals in a school district.
- Principals need to learn as much about central office perspectives as the central office needs to learn about principals' perspectives.
- Central office leaders themselves need to learn more about kinds of school leadership that are necessary for successful middle school reform.

Assessment

How will Chattanooga know when students are achieving more?

Over the last several months, the Chattanooga City School system has been searching for ways to make higher achievement *for all students* the centerpiece of its middle school reform plan.

Higher achievement has been the goal since the district began its effort several years ago, but in a new grant request to the Clark Foundation earlier this year district educators acknowledged that "schools have set up components characteristic of reforming middle schools . . .but are not effectively using these components to foster high levels of student achievement."

The district also admitted that "schools with large proportions of low-achieving students do not provide rigorous and engaging courses to help students master content through deep learning experiences."

In the Clark proposal, the district is very explicit about its plans to be more aggressive about student achievement by examining each school's progress more closely.

The district will make better use of school "report cards" that include testing results, student and teacher attendance information, and other data. The district will also scrutinize student and team "portfolios"—examples of the actual work students and teachers do—and require schools to answer some tough questions as part of a school-by-school "self study."

The district's goals are clear: more thorough assessments of student performance and better processes for measuring the success of various reform strategies, all tied together each year in a straightforward annual report.

But this question remains: Can the district move from its current over-dependency on basic skills test scores as *the* measure of accountability?

The test results from the Tennessee Comprehensive Assessment Program (TCAP) can serve as one important measure of progress—but only if the district spends some time deciding how its curriculum connects to the testing program and how it needs to supplement TCAP in order to get the best picture of reform's successes and failures.

For example, the 8th grade TCAP mathematics test includes few if any

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New models of accountability

Most of us—parents, educators, community leaders, journalists—agree that schools must be held accountable for student success. Without such accountability, how can we hope to raise the academic performance of all students?

But what do we mean by *accountability*? Does that mean we judge a school's quality solely on the results of student test performance?

Education researcher Linda Darling Hammond warns that school accountability should not focus exclusively on student achievement data. It's too easy, she says, to fabricate "an illusion of effectiveness" by comparing results to less well-situated schools, or to reward teachers who teach only to the test (with drill and skill worksheets) and needlessly limit what children learn.

Test scores are important—but so are other indicators such as systematic review of student work samples, parental input on report cards, family conferences, and student interviews, surveys, reading logs and inventories.

Some schools have poor working conditions and a high teacher turnover; they may be so underfunded that they have few curriculum resources and may even lack test-taking preparation materials.

A number of research studies have shown that student achievement differences virtually disappear when minority students have access to comparable curricular opportunities and experienced, qualified teachers. Darling-Hammond does not claim that resources predict student results, but she says they are a prerequisite for many school conditions that influence teaching quality and student learning.

Questions like these could be used to help judge a school's success: How is time allocated across activities and subject areas? What kinds of knowledge and skills do teachers possess; and how are these resources deployed in best interests of all students? How are teachers and students grouped for instruction? How and how often are parents involved in decisions and school activities? How is class time used? What kinds of intellectual materials do students encounter? What do students (and parents) think about school experiences?

Some schools in New York are involved in a new, rigorous accountability program that goes far beyond the usual paper tabulations of success and failure. A team of professional educators visit a school for a week. They focus on student work, direct observations of teaching and learning, student shadowing, interviews, and group forums. It's not unusual for a five-person team to observe 44 teachers teaching 128 lessons, conduct 26 interviews, and attend 17 school meetings and activities.

The feedback from these expert teams, teachers say, serves as a powerful form of professional development and promotes systematic thinking about ways to continuously improve the school.

ASSESSMENT

algebra questions, yet 80 percent of CPS's eighth-graders are taking algebra now. If the district decides to measure the performance of eighth grade students or math teachers using the TCAP scores alone, it's making a big mistake.

The Chattanooga community can take some comfort in the fact that a team of teachers and principals are researching better (and more rigorous) ways to hold themselves accountable. But the community will find less comfort in statements by the district superintendent that suggest TCAP could be used as the primary device to grade teachers and make decisions about continued employment.

TCAP results must figure into judgments about teacher performance *when there is a strong match* between the tests and the curriculum teachers are expected to teach. But that isn't always possible—or even desirable.

The Problem With TCAP

The Chattanooga Public Schools rely on the same measure of progress that all school districts in Tennessee use—TCAP. And, like every other district, Chattanooga educators set a lot of store in TCAP results. The state's "value-added" assessment system doesn't leave them much choice.

The valued-added program, which began in 1992, attempts to detect whether schools (and ultimately, teachers) have increased a child's knowledge and skills during a particular school year or in a particular course. The test results carry rewards and penalties for schools (and for teachers if schools decide to use the value-added information to judge teacher performance).

TCAP itself consists of a series of basic skills, multiple-choice achievement tests in reading, language, math, science, and social studies. The tests are administered every spring to a selection of grades, and the average student scores are compared to a national group of students who took the tests sometime in the past.

TCAP reports are generated for both educators and the public. Local newspapers often publish school-by-school results for various grades and subjects.

There are two persistent problems with these kinds of nationally "normed" basic skills tests: they may not match up with a district's academic program (as in the example of eighth grade algebra), and they do not test for skills and knowledge that go beyond "the basics."

The most recent TCAP report on the Chattanooga schools revealed that for the most part its middle school students are behind the "national eight-ball." (See the chart below.)

These results (which don't include the 1994-95 school year) suggest that 6th grade performance across the district is weak. In all five subject areas, 6th grade average scores were in the "ultra red" zone—meaning that estimated student achievement gain was dramatically below than the national average. The table shows that 7th and 8th grade scores are considerably better—with only one "red zone" in the 7th and two "ultra red" zones in the 8th.

These test results are important to the public. But when they are lumped together as they are in this table ("aggregated" is the education jargon), the differences between schools and within classrooms are masked.

Different schools have different student transfer and absenteeism rates. Different schools and different classrooms have different teachers with differing levels of teaching preparation and even teaching ability. Some schools—even within the same district—may have better teaching materials.

These are not excuses but possible reasons why student performance slides up and down the scoring scale from one year to the next—or one grade to the next. The public deserves to know a lot more about the *why* of these test scores.

Why, for example, do math scores jump from the bottom category (ultra red) to the top category (green) from 6th to 7th grade—then back to the bottom again in 8th grade?

Are 7th grade math teachers—compared to their counterparts in the 6th and 8th grades—stronger in their content area? Or in teaching methods? Has their professional development been

Cumulative Chattanooga Achievement Gains as Percentage of National Norm (1991-1994)

Middle School Grade Level by Specific Subject Area Test

Grade	Reading	Language	Math	Science	Social Studies
6	Ultra Red	Ultra Red	Ultra Red	Ultra Red	Ultra Red
7	Green	Red	Green	Green	Green
8	Green	Green	Ultra Red	Green	Ultra Red

Code:

- Green - estimated gain equal to or greater than national norm
- Yellow - estimated gain below national norm - but less than one standard error
- Red - estimated gain below national norm - but less than two standard errors
- Ultra red - estimated gain below national norm - but more than two standard errors

Assessment

better? Have the 7th grade students attended their math classes more frequently? Do 7th grade teachers, who are often more "subject-oriented," catch their students up on the basics they missed in elementary school? We know most of the 8th graders in Chattanooga take algebra, and the TCAP doesn't test for algebra. Does that explain the big drop from 7th to 8th grade?

Are most of the students at a school with good TCAP test scores learning challenging material and achieving at high levels? Maybe not. There may be just as many significant curriculum problems at a higher-scoring school as a lower-scoring one.

The information from TCAP alone can't answer these important questions. The schools and the community will have to look outside the current testing system for ways to answer them.

The impending merger and the promise of a "new day" offers the community a chance to decide if it wants accountability based on clear and rigorous standards that are used to improve the system, or accountability based on a single national test created with no particular set of standards in mind (see "New Models of Accountability" on page 13).

The public wants accountability

"I guess there still are a lot of contradictions in the system," says one teacher trying to puzzle out Chattanooga's current approach to accountability. "We want reform but right behind it we say you better get those TCAP scores up.

"What it takes to get TCAP scores up in a hurry flies right in the face with what we are trying to do with our teaching and learning reforms," she says.

Another teacher says that "the way you get TCAP scores up is to drill students on the little group of facts and skills you know will be on the test. It doesn't deepen students' understanding, but it bumps up the numbers."

Another teacher who has had extensive training in Hawaii Algebra admits that she "junked the program last year because of the fear of TCAP. The eighth grade TCAP math test isn't going to tell us anything about Hawaii Algebra. It's like we're teaching our students Japanese and then testing them in French."

This dichotomy between the state-mandated standardized testing program and the beefed-up curricula of reforming school systems creates unrest and distrust in many communities, including Chattanooga.

Parents, business leaders, and other community spokespersons want a way to judge school success that's unambiguous. They're reluctant to accept the argument that TCAP might serve as an obstacle to school reform.

"There must be something beyond TCAP scores," says Jack Murrah, president of the Lyndhurst Foundation. "But educators must be accountable for results. So I do not buy the wholesale criticism of TCAP—it comes across as if educators do not want to be accountable."

For Murrah, a key to the new accountability system is the standards development currently underway. Under this new system, the reformers propose not only to clearly specify what all students will know and do, but how well they will do it at each grade level.

Murrah is all for this—and more.

"In some ways, the best accountability system is kind of simple," he says. "If we could get out of the way and give some really good teachers the opportunity to work with each other, they could lead a process that would inform us whether a child has learned the skills and knowledge necessary."

Murrah believes that teachers could develop a review "based on work samples, conversations with parents and other educators, and the like. Then, they would tell us in language that we can understand whether the system is making progress."

Teachers are skeptical about their role in assessment

Many teachers have a hard time believing that the system would ever let them work on such matters and eventually take control of the process.

"We could not do this type of work unless we totally change the school—and that means we must change the community too," says one teacher who is studying accountability.

"For teachers to be more in charge of their own accountability there must a dramatic change in leadership in the Chattanooga school system. I don't see it happening. Those that have the power want to remain in control."

The teacher offered as an example a rumor that surfaced in January. The district was abuzz with talk about how the central office was going to punish teachers at Alton Park if they did not increase their TCAP scores significantly.

"I was told that if our scores do not come up, then all of us will be without a job or go on the permanent sub list," one Alton Park teacher said.

The Alton Park teachers complain that the curriculum they are required to teach does not match well with the TCAP test items for their grade levels.

Are these complaints legitimate? They may well be. Do they indicate that good teaching is being masked by bad testing? That's something no one can say. Until the district has an assessment program geared specifically to what it teaches and what its standards and goals are, it will be difficult to hold teachers fully accountable for results.

The furor stirred up by the threats at Alton Park forced the district to reconsider its plans to remove or demote teachers. Instead, the superintendent is proposing a highly structured, teach-by-the-numbers approach, often called "directed learning." Alton Park teachers would follow detailed lesson plans and instructional outlines, geared to the kinds of items included on TCAP. The approach, already being used at two elementary schools, will likely increase TCAP scores.

Ironically, the approach will also run counter to the district's professed long-term objectives: high content and high expectations for all students.

If the teachers are the problem at Alton Park, the new system will preserve their jobs. What it will do for students is less clear. If the teachers are not the problem at Alton Park, then they are being condemned to a system of rote teaching without a trial.

THE FOCUSED REPORTING TEAM

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